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The Impact of Project-Based Learning on Student Learning Perspectives and Achievement in a Social Studies Classroom

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DEDICATION

Completing my doctorate degree has always been one of my career goals. I would like to dedicate this to my ever-loving family who was always behind me no matter what. Mom and Dad, you can finally stop asking if I am finished with school. Hannah, my love, we might actually be able to eat dinner together on a regular basis now. Thank you for everything you have ever given me, and hopefully I can give back as much as I have received.

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ABSTRACT

The purpose of this study was to ascertain the possible impact of project-based learning on student learning perspective and achievement in a social studies classroom. American schools are in an era of standardized testing based on standards-driven curricula that only teaches basic recall and recognition. School curriculum should be focused on providing students with the skills necessary for them to be successful after high school graduation. Higher-level thinking skills such as critical thinking, collaboration, and self-direction are not easily learned with traditional, essentialist teaching methods. Students can quickly look up facts with ready access to the internet, so they need to be equipped with skills that go beyond memorization. The study was conducted in my AP Human Geography class in a large South Carolina high school. In the study, students became self-directed learners by using project-based learning to prepare for the class final exam and AP Exam administered in May. Students used project-based learning to apply practically the ideas, concepts, and theories required to be successful on both exams. Both qualitative and quantitative data collection occurred through field notes, observations, interviews, surveys, and summative assessments.

Keywords: Project-based learning, social studies, high school

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LIST OF ABBREVIATIONS

AP ..... Advanced Placement

PBL .....Project-Based Learning

CHAPTER 1

INTRODUCTION

In June 2016, my school district held its annual symposium to bring together teachers, administrators, and other staff to share ideas about best school and teaching practices. One of the sessions at the 2016 symposium was a panel discussion on college and career readiness. This session had surprisingly low attendance despite representatives from Apple, Verizon, and the local Chamber of Commerce on the discussion panel. The moderator's first question was "What type of employees are you looking for to become successful at your company?" Jeff Lloyd (2016), the representative from Apple, stated that his company looks for candidates who have experience with teamwork, collaboration, innovation, and results-oriented work. Kevin Owens (2016), the representative from Verizon, stated that his company looks for candidates who have behavioral skills that allow them to work with others, especially in stressful situations. Mary Graham (2016), the representative from the local chamber of commerce, said high-tech businesses in the community are looking for individuals with project-based learning (PBL) skills that allow people to apply those skills to any situation. Although these business leaders outline what employees need to be successful, the American education system has shifted to an accountability system that emphasizes high-stakes testing and standardized curriculum. This emphasis has created a typical American classroom ill-equipped to teach these higher-order thinking skills like critical thinking and collaboration (OECD, 2016a; Berends, Chun, J., Schuyler, Stockly, &

Briggs, 2002; Mehta, 2013; Roberson & Woody, 2012; Neo & Neo, 2009; Miyamoto, 2008).

With business leaders wanting workers who can think critically and problem solve, the Organization for Economic Co-operation and Development (OECD) developed a test to measure these exact skills. The OECD (2016a) saw there was a "need for internationally comparable evidence on student performance" (p. 3) and developed the Programme for International Students Assessment (PISA), which has been administered in numerous countries since 2000. The PISA is administered every three years to 15-year-old students from the participating countries.

> The assessment does not just ascertain whether students can reproduce knowledge; it also examines how well students can extrapolate from what they have learned and can apply that knowledge in unfamiliar settings, both in and outside of school. This approach reflects the fact that modern economies reward individuals not for what they know, but for what they can do with what they know. (OECD, 2016a)

In 2015, the OECD (2016b) reported that 72 countries/economies participated in the PISA. The United States produced average scores in reading and science and below average in mathematics. For comparison purposes, the United States scored 60 points lower than first place Singapore in science, 38 points in reading, and 94 points in math (OECD, 2016a).

A society can be understood by examining two critical components: the governmental system and the economic system that guides how it functions. Historically, American education has prepared its populace to participate in our democratic republican

governmental system and within a capitalist economy (Spring, 2014). After the American Revolution, the government recognized a need for schools to educate citizens on the governmental process and public policy, so they could contribute to the republic as voters (Spring, 2014). Spring stated that American leaders attempted to create Anglo-American dominance in American education, which would translate to continued Anglo-American dominance in the country. Webb (2006) stated the founding fathers were strongly influenced by Enlightenment thinker John Locke, who "believed the goal of education was to create the moral, practical individual who could participate effectively in the governing process" (Webb, 2006, p. 88). The same message is relayed through analysis of the letters from the founding fathers. In a letter written by George Washington, he stated, "The best means of forming a manly, virtuous, and happy people will be found in the right education of youth" (Washington, 1784). In another letter written a year later, John Adams of Massachusetts said:

> The whole people must take upon themselves the education of the whole people and be willing to bear the expenses of it. There should not be a district of one mile square, without a school in it, not founded by a charitable individual, but maintained at the public expense of the people themselves (Adams, 1785).

Simply knowing information to support the government is not enough in the 21st century; citizens should be able to think through problems, not just think in basic terms (Mehta, 2013; Roberson & Woody, 2012). However, essentialist teaching methods geared toward standards-based curriculum and memorization of content dominates contemporary American education (Roberson & Woody, 2012). In relation to the revised Bloom's taxonomy, essentialist instruction focuses on the lower-level cognitive process

of remembering and understanding (Anderson & Krathwohl, 2001). For example, in the past, students would be required to know what year the U.S. Declaration of Independence was adopted and who signed the document. Students would not be required to use the cognitive process of evaluating the Declaration of Independence as far as why it was written to whom it was addressed, the process of creating and gaining the support for the document, and the consequences it created. Due to globalization and technological advancements, people have access to almost any information with a touch of a button. Memorization of facts is no longer the best way to produce the global citizens needed to effectively contribute to the greater society. There needs to be a deeper learning and understanding in schools that better prepares our students for the future (Huberman, Bitter, Anthony, O'Day, 2014).

Classrooms geared toward student-centered lessons and skills-based standards are more suited to prepare students to be informed citizens (Ku, 2009). Project based learning (PBL) is one teaching method that allows for students to become self-driven critical thinkers. PBL requires students to interact in inquiry-based learning because they must become self-driven to produce a final product for PBL assignments (Grant, 2011). For core subjects, Lent (2015) says that inquiry-based learning, seen in curriculum structured around pedagogy like PBL, is one of the better instructional methods when it comes to learning complex concepts. I implemented PBL AP Human Geography to provide students with more inquiry-based, self-directed learning as part of this action research study (See Appendix A for more information on the structure of the AP Human Geography curriculum).

In addition to creating more informed citizens and graduates, PBL could open the door for students who have been underrepresented in upper-level courses in the past. Underrepresented traditionally marginalized students have not been given the same opportunities as the white majority in the American education system (Contreras, 2011). Various studies have shown that PBL will help to close this opportunity gap in the United States (Creghan & Adair-Creghan, 2015; Contreras, 2011; Payne, 2011). Life and cultural experiences of traditionally marginalized students may not have equipped them for the traditional ways of a classroom in the United States (Tatum, 2013; Kirk & Okazawa-Rey, 2013). Perhaps a different perspective on learning can help students thrive in an arena they have not before. The cycle of socialization that has previously left out so many students can be broken with meeting students where they are and cultivating their own interests and ownership of learning (Harro, 2013).

Problem of Practice Statement

The identified problem of practice for the present action research study involves high school students learning the higher-level thinking skills needed to be successful citizens after high school graduation. The specific problem is that many educators in South Carolina are using teaching methods that do not cultivate higher-level thinking skills; instead, they use teaching techniques that cater to surface information and memorizing facts for success on standardized tests (Mehta, 2013; Vogler & Virtue, 2007). In the last few decades, American education has focused on standards-based high-stakes testing that has caused teachers to change their teaching practices (Lefkowits & Miller, 2006). These standardized tests have caused teachers to revert to essentialist theory that relies on memorization of basic facts. These facts are only surface knowledge

such as the ability to recognize terminology, dates, or specific elements in a curriculum. Absent from curriculum, especially in the social studies classroom, are higher level skills on Blooms taxonomy. The lawmakers who backed the standardized test movement seem to have a different value on the current high-stakes testing and fact-driven curriculum than the public (Lefkowits & Miller, 2006). When my students first enter my classroom, they struggle to go beyond simple memorization. Our first test of the year is always a shock to their system, even when I stress the need to use analysis and creativity in the studying process. I see this struggle each year, and it is evident most students rarely had to utilize high-level thinking in the past.

Silva (2009) stated that higher-level skills in education are characteristics such as creativity, innovation, integrity, self-direction, work ethic, and collaboration experience. Adler (1982), a perennialist, stated that the "enlargement of the understanding" is "a mode of teaching and learning that has all too rarely been attempted in the public schools" (p. 28). However, this "enlargement of the understanding" taught through inquiry and questioning is exactly what produces skills needed to be successful in the contemporary world. Therefore, teachers need to use methods that cultivate this type of thinking to prepare students effectively. Curriculum should be centered on analysis and creation. For example, instead of just memorizing a hypothesis, students should be taught and possess the skills to explain why a specific hypothesis might be wrong and suggest an alternative theory (Anderson & Krathwohl, 2001). Students should have a basic knowledge of events and ideas; Crocco and Costigan (2006) argue that instead of helping public education, high-stakes standardized testing might be destroying it. Teacher accountability for test scores gives teachers no other choice but to teach to the test, and

federal mandates have focused on math, English, and science for testing purposes. Noticeably absent is social studies, commonly thought to be one of the four core subjects. Some U.S. States have added social studies in the testing mix, but those tests are also focused on mainly-content based fact questions. Some social studies teachers have called their high-stakes assessment curriculum a "forced march" where they do not have room for deviation and meaningful student-centered assignments (Crocco & Costigan, 2006). A continuation of this will not allow for teachers to provide the higher-level thinking skills needed to be successful in the 21st century, and "the study of social studies will become nothing more than the ability to regurgitate a collection of facts listed in a state-mandated curriculum framework" (Vogler and Virtue, 2007, p. 57).

Purpose Statement

The purpose of this action research study was to implement project-based learning (PBL) in my Advanced Placement (AP) Human Geography class to improve the students' perspective of their own learning. I intended for students to learn how to understand information on a deeper level, not just know basic facts and definitions. I used PBL's inquiry-based learning, which helped students develop "intrinsic motivation and learn to think strategically about core academic concepts" (Lent, 2015, p. 104). De Witte and Rogge (2016) stated that inquiry-based learning has proven to increase achievement, motivation, and overall class atmosphere. Obtaining these skills will allow students to think outside of the box and apply familiar concepts to unfamiliar situations. As stated by Adler (2012), "Skills cannot be acquired in a vacuum" (p. 26), and PBL may allow students to connect ideas across disciplines and become better critical thinkers overall.

Research Question

Historically, traditional teaching methods have not maximized learning for each student. These methods are good for obtaining surface knowledge but fall short on developing critical thinking skills. As an attempt to provide students with higher-level thinking skills and a better understanding of the content and how to use it in the outside of the classroom, I implemented project-based learning in the AP Human Geography classroom.

RQ1: How does project-based learning impact students' perspectives of their own learning in AP Human Geography?

RQ2: After using project-based learning, do summative assessments in class indicate that students are prepared to be successful on the AP Human Geography Exam?

Action Research Design

Action research gives classroom teachers the power to influence educational change (Dana & Yendol-Hoppey, 2014). It aims to maximize the efficiency of teaching practices so that curriculum is focused on what is best for students. Action research is an appropriate methodology for this study because, unlike many methods of traditional research, action research is conducted by people in the education field for practical use in the classroom. Mertler (2014) stated that "action research typifies a grassroots effort to find answers to important questions to foster change" (p. 9). Action research is individualized to a certain classroom and is not meant to be generalized to a broader population.

Mertler (2014) said action research can be more cyclical compared to linear traditional research methods. In action research, a problem is identified, information is gathered through an attempted intervention, and the data is analyzed to determine the impact on the problem. If the analysis is negative or inconclusive, a cycle can begin by going back to step one of the process. (Mertler, 2014). The final step will involve reflecting on the present study and determining the next step.

This study aimed to increase student perspective of their own learning in AP Human Geography by implementing the project-based learning (PBL) teaching method, which has the potential to assist students in gaining critical thinking and creativity skills. During the 2017-2018 school year, I used an exploratory mixed-method design to determine the impact of PBL on student learning perspective and achievement. Students completed a yearlong project called *Sovereignty* that required them apply what they learned in class to the real world. I utilized a flipped classroom model so students could work at their own pace through the initial necessary information before working on their personalized *Sovereignty* project. Checkpoint days were instituted so I could individually meet with the students and help guide their progress and performance when it came to class material and *Sovereignty*. The study consisted of two phases: a PBL assignment in each unit of study throughout the school year and a PBL assignment that assisted in reviewing and studying for the AP Exam on May 18, 2018. Field notes, observations, and interviews were types of qualitative data collected (See Appendix B for qualitative instrumentation tools). Quantitative data was obtained by using assessment scores, surveys, and student activity logs (See Appendix C for quantitative instrumentation tools).

Social Justice

Social justice was an important part of the present study. Student-centered teaching models, like PBL, has proven to help close the achievement and opportunity gap (New Tech Network, 2016; Halvorsen et al., 2012; Corcoran and Silander, 2009). At my school, the demographics of honors and AP courses traditionally do not match the demographics of the school. When compared to white students, students who identify as minority ethnicities and students from low socioeconomic enroll in upper level classes at a much lower rate. Schramm-Pate and Jeffries (2008) stated that teaching students to "face discomforting questions of social justice that might challenge their own comfort and worldview requires tact, planning, patience, and a bit of bravery" (p. 1). The current era of high-stakes testing has created teachers who act as gatekeepers for their classes since test scores are often part of their evaluations (Rowland & Shircliffe, 2016). Although diversity encompasses differences, social justice focuses on "inequality as a social form that shapes life changes for people in ways that are more profound (more 'unequal') than simply different" (Adams et al., 2013, p. 1). Although advocates of high-stakes testing have claimed the tests will help close the opportunity and achievement gap between the white majority and their non-white counterparts, studies show that a homogeneous curriculum has developed that ignores the knowledge of other cultures (Sleeter, 2005). More importantly, there is an opportunity gap because traditionally marginalized students have not had access to the same opportunities in upper-level classes. Although intended to help with the achievement and opportunity gap, standardized testing has made the problem worse.

Dissertation Overview

Chapter One

The introduction outlined the problem of providing students with the higher-level skills needed to become college and career ready. Knowing basic information is not enough for students to be successful after high school, but the era of high-stakes testing structured around No Child Left Behind created classrooms geared to basic thinking skills just as memorization. In contrast, project-based learning (PBL) is way for students to create ownership of their own learning and apply their knowledge to practical experiences. PBL allowed students in my AP Human Geography classroom to collaborate in creative ways to become self-driven learners and use their knowledge in practical, real world situations.

Chapter Two

This chapter will focus on the literature already published about project-based learning, inquiry-based learning, and student-centered classrooms. The key concepts covered will focus on learner-centered classrooms, inquiry-based learning, self-motivation, higher-level thinking skills, and 21st century learners.

Chapter Three

The action research methodology is an exploratory mixed method design that will outline the implementation of project-based learning (PBL) in AP Human Geography. Instituting a flipped classroom, students were provided a calendar of assignments for each unit and worked at their own pace to complete requirements such as quizzes, activities and our PBL project called *Sovereignty*. For *Sovereignty,* each student was given one of six "newly created" countries in the world and developed this country by

using the concepts we learned in class. Throughout each unit, I set up checkpoint days, so I could individually meet with each student to help monitor their progress on assignments and *Sovereignty*. PBL played its biggest role in the six weeks leading up to the AP Exam because students used their *Sovereignty* country to complete a project that helped them be prepared to perform well on the AP Exam. Participants for the study were chosen after I administered the class final exam which serves as practice for the AP Exam. The class final exam is conducted one week prior to the AP Exam and the selected participants for the study were the 15 highest scoring and 15 lowest scoring students on the class final exam. This selection was purposeful, so I could obtain student perspectives from the students who were most successful and least successful in the class according to the class final exam scores.

Chapter Four

This section will cover the impacts of project-based learning in AP Human Geography. For data collection, I used the class final exam for participant selection and chose the top 15 and bottom 15 scoring students to participate in the study. This selection of 30 students was purposeful so I could obtain feedback from students who performed the best and the worst according to the class final exam. That allows perspective from students of different performance levels and not a random sample that could produce skewed results due to a larger number of students from one end or another. Student interviews and surveys provided evidence that students became more self-directed learners and gained ownership of their own learning. Students from both subsets had positive views of their learning and came away from the study with more of an interest in social studies. Students learned to manage their time better and could identify their own

strengths and weaknesses after the study, and will manage both the strengths and weaknesses in their future classes.

Chapter Five

This section will focus on future research and determine the merit of project-based learning in a social studies classroom. In addition, there will be a detailed explanation of the action plan for implementation by an interested reader. I met with a team consisting of other teachers and administrators to discuss my results, and we determined there was enough evidence to warrant research in other social studies classes and disciplines within the school.

Conclusion

Contemporary American schools do not create an environment of innovation and creativity students need to be successful after high school. Teacher-centered classrooms that require low-level thinking skills has left classrooms ill-equipped to provide students with useful skills. Project-based learning **(**PBL) creates a student-centered classroom that will hopefully give students more agency of their own learning and create a deeper understanding of the AP Human Geography curriculum. Students will be more engaged and use cognitive skills higher on Bloom's Taxonomy (Anderson and Krathwohl, 2001). PBL may make students analyze and create topics and concepts learned in class.

CHAPTER 2

RELATED LITERATURE REVIEW

Project-Based Learning

Mertler (2014) stated that action research should be based on real classroom data and carried out by teachers in their own classroom. As part of action research, data collection and looking at past research is essential because researchers must know what has already been analyzed in the specific field so they can know what did and did not previously work.

PBL is a student-centered instructional method that has recently been gaining support. One consistent conclusion by most researchers is that PBL increases the acquisition of higher-level thinking skills like critical thinking, collaboration, student self-agency, and overall student achievement (New Tech Network, 2016; Morales, Bang, & Andrew, 2013; Barak & Asad, 2012; Neo & Neo, 2009; ChanLin, 2008; Cuevas, Lee, Hart, & Deaktor, 2005; Boaler, 1998). Ultimately, it is the responsibility of the teacher to choose an instructional method that best benefits students, and PBL is a method that has practical, real-world learning at the forefront (Kimonen & Navalainen, 2005).

What is Project-Based Learning?

Project-based learning (PBL) can take a variety of forms depending on the subject, teacher, curriculum, and overall educational approach (Helle, Tynjälä, & Olkinuora, 2006; Katz & Chard, 2000). Larmer and Mergendoller (2010) stated that school projects that consist of students researching a topic and making PowerPoint

slides are “all-too-common examples of the kind of meaning-lite assignments that teachers bill as projects” (p. 34). Projects are often seen as busy work given by teachers to take up class time until the next assignment. Larmer and Mergendoller concluded that the cognitive engagement and personal meaningfulness of a project fulfill an educational purpose. PBL is a student-centered learning model that meets both requirements and allows students to engage in ideas and concepts that pertain to their lives, not just an assignment that pertains to a state standard. PBL has gained supporters and advocates in contemporary education due to its emphasis on experience, self-growth, and student-centered curriculum. Personal experience in education is not new and goes as far back as Dewey (1938), but PBL is a wide-ranging method that incorporates more than just personal experience. PBL allows students to pace themselves, complete a variety of assessment types when they are ready, creates a real-world learning experience, and allows for flexible learning environments that promote student achievement and higher-level thinking skills. Although PBL can look different in various classroom, Larmer and Mergedoller (2010) stated that there are seven essentials in PBL classrooms:

1. A need to know: This is provided by the teacher to spark interest in a certain subject;
2. A driving question: The question must capture the heart of the project which gives a sense of purpose and challenge. It is important for the question to be provocative, open-ended, complex, and linked to what the students are supposed to learn;
3. Student voice and choice: Students should be able to show their own style in the project if it produces the desired outcome;

4. 21st century skills: Projects should allow students to build collaboration, communication, critical thinking, and the use of technology;
5. Inquiry and innovation: Inquiry-based learning allows for students to see more meaning in their project and outcome. Real inquiry then leads to innovation which means that students are not reproducing information, they are creating their own;
6. Feedback and revision: Students should critique themselves to make sure they are moving in the right direction. The teacher can then check again behind the students to make sure they are making progress; and
7. A publicly presented product: When students present their findings to someone else other than the teacher and class, it becomes more meaningful (Larmer and Mergendoller, 2010).

According to Barron and Darling-Hammond (2008), to ensure that students understand the ultimate outcome, project-based learning requires clear learning goals at the beginning of the lesson. Teachers should measure the ongoing progress of students and redirect when necessary. Assessments should be diverse, allowing the students to have an impact in the way they show their learning (Barron & Darling-Hammond, 2008). Katz and Chard (2000) stated that PBL often requires students to apply knowledge from various subject areas, unlike isolated approaches that concentrate on facts. Often, these projects allow students to make connections beyond school, creating a level of thinking from which they can benefit for years to come. Kokotsaki, Menzies, and Wiggins (2016) explain PBL as a student-centered form of instruction. PBL focuses on student's autonomy, constructive investigations, goal-setting, collaboration, communication, and

reflection within real-world practices (Kokotsaki,Menzies, & Wiggins, 2016). Al-Balushi and Al-Aamri (2014) assert that PBL stays within the subject context area, but students learn more than just specific content knowledge. Real-world situations are a main focus so that students can take what they learned and apply it to other aspects of school and life. Although a project might be specific to a subject, the knowledge from other subjects will be necessary for students to demonstrate full understanding (Al-Balushi & Al-Aamri, 2014).

Helle et al. (2006) emphasized the collaboration and task oriented characteristics of PBL make the teaching model appealing to students. This allows students to show self-agency and the capability of following an idea from start to finish. Helle et al. analyzed the differences between project-based learning and problem-based learning. Both learning models use collaboration, critical thinking, and problem solving, but the absence of an end product for problem-based learning creates the biggest difference. There is sometimes a lack of finality with problem-based learning, because students are just studying and learning information. There could be a summative assessment but not an encompassing activity or project.

Recommendations for Project-Based Learning Teachers

According to Lam and Cheng (2009) PBL can be beneficial for students, but "a key factor contributing to its successful implementation in the local setting hinges on teacher motivation in using this new teaching approach" (p. 566). Tamim and Grant (2013) studied six teachers implementing PBL and found that their intended uses fell into four categories of implementation: reinforcer, extender, initiator, and navigator. Specific teachers found that PBL was useful, but all had different contexts in usage. Reinforcers

used the PBL process to supplement the content learned by students. Extenders felt PBL was best used in requiring students to take their ideas one step further than required in the class. Initiators will launch a unit using PBL research questions and have the end product help in answering these questions. Navigators switch between the other categories by using the PBL process in the way that is most effective for a particular unit or lesson. Tamim and Grant (2013) stated that "even though teachers valued the positive learning outcomes of PBL, how they used depended on their belief of when and where a PBL activity is most conducive in the learning process" (p. 89).

Kokotsaki, Menzies, and Wiggins (2016) formulated specific recommendations for teachers after researching various PBL classrooms and models. The recommendations have some overlap with the essentials of PBL from Larmer and Mergendoller (2010), but there are differences and specific ideas for teachers that warrant mentioning when creating a PBL lesson or classroom. The six recommendations from Kokotsaki, Menzies, and Wiggins are as follows:

1. Student support: The teacher need to be able to guide the student, especially with items such as time management;
2. Teacher support: Opportunities such as professional development need to be available and school administration should fully support the process;
3. Effective group work: Students need to learn effective collaboration skills in order to produce the best end products;
4. Balancing didactic instruction with independent inquiry method: The teacher needs to ensure students develop a certain level of knowledge throughout the process;

5. Assessment emphasis on reflection, self and peer evaluation: Students and teachers need to regularly monitor progress so the goal is always within reach; and
6. An element of student choice and autonomy throughout: Choice will lead to a sense of ownership and control over the students' learning (Kokotsaki, Menzies, & Wiggins, 2016).

Similarities between Kokotssaki, Menzies, and Wiggins (2016) and Larmer and Mergendoller (2010) is the emphasis on student choice, inquiry, and ownership of learning. In PBL, students cannot rely on the teacher to provide every answer and feedback. Instead, students must become self-directed and learn how to navigate their own learning. A teacher is still necessary in PBL because their role is a guide for students as they work through the learning process at their own pace and understanding. Both sources also say teachers need to manage student choice, so the learning becomes more individualistic and personal. Students have freedom to choose the way they learn and subjects they concentrate on, but teachers are responsible for directing students toward purposeful choices. There is a danger in PBL of students getting too far off task and missing the big picture of what they should be learning in a certain unit or area of study. There is a fine line with choice and ownership and misdirection, so teachers must understand each student's individual needs.

With the teacher playing such an important role in PBL, Mergendoller and Thomas (2005) used 12 experienced educators of PBL to establish seven specific practices that teachers must participate in before, during, and for the future in PBL. This list takes student and teacher responsibilities into account and provides more specific

themes that teachers can use when concentrating on during the planning and implementation of PBL. For example, since this type of learning might be new for both the student and teacher, the following list has a theme for establishing culture in the classroom. Without the culture of student empowerment, PBL might not create as much success as desired. All the themes are as follows:

1. Time management: Projects need to be scheduled effectively in relation to other teachers and have a plan for overrun;
2. Getting started: Encourage thoughtful work early on so that students know what is expected of them and how much work will be required to complete their requirements;
3. Establishing a culture that stresses student self-management: Students need to understand the requirement that they make decisions for themselves;
4. Managing student groups: Students must keep track of what themselves, and their group members are doing;
5. Working with others outside the classroom: Other teachers, parents, and community members can assist with the feasibility of their external partnerships;
6. Getting the most out of technological resources: Students should be able to make informed choices as to what materials and resources are best to use;
7. Assessing students and evaluating projects: A variety of assessment methods should be used, so students understand the importance of individual and group performance (Mergendoller & Thomas, 2005).

Another key for teacher implementation of PBL is the importance of effective scaffolding (Hmelo-Silver, Duncan, & Chinn, 2007). If teachers do not scaffold effectively, then students have the possibility of having too much information at once and struggling with breaking it down themselves. Teachers must break information down so that students will learn a little at a time, with multiple checkpoints during the process. Once they reach a certain point, they can then set off on their own to apply information to their specific project (Hmelo-Silver, Duncan, & Chinn, 2007). Drain (2010) stated that PBL is most effective when implemented as a two-step process with the teacher first presenting the information to students and then the assignments and products be given to the students. Gresalfi, Barnes, and Cross (2012) specified that teachers can still help students through the PBL process, and at certain points they must direct students for the students to understand the goal of the end product. There must be a balance between allowing students to learn for themselves and the teacher directing that learning. Also, teachers must try and implement as many cross-curricular and multi-discipline segments of a product so students can connect ideas across classes (Grant & Branch, 2005).

Theoretical Base

Contemporary students do not have 21st century skills like critical thinking and problem solving due to the recent push for standards-based high-stakes testing (Crocco & Costigan, 2006; Croft, Roberts, & Stenhouse, 2016; Farisi, 2016; Lefkowits & Miller, 2006; Pane et al., 2015; Roberson & Woody, 2012; Neo & Neo, 2009; Silva, 2009; Vogler & Virtue, 2007). My theoretical base is an implementation of learner-centered ideology with some social reconstructionist elements through the PBL teaching model.

Inquiry-based learning is a key aspect of PBL and that level of learning

incorporates higher-level and 21st century skills like self-agency and individualism. This section will show how essentialism and Scholar Academic ideology began in American schooling and has been the dominant base for curriculum since the earliest American schools. Next will be an analysis of how learner-centered ideology, with parts of social reconstruction ideology and perennialism, can help move American schools in the right direction.

Student Outcomes in Previous Studies

PBL has been used and studied in various phases of schooling ranging from primary school to higher education (Kokotsaki, Menzies, & Wiggins, 2016). Previous studies fit into various themes that include the following: entire school implementation, importance of teacher motivation to use PBL, impact on student behavior, attendance, and engagement, middle school social studies success, and secondary science success. Kokotsaki, Menzies, and Wiggins (2016) stated that there cannot be a specific link between PBL implementation and overall student success, because all previous studies have not had control and experimental groups. The researchers stated that most of the past studies have implemented a pretest-posttest design that shows results for one specific classroom but without complete validity (Morales, Bang, & Andrew, 2013; Barak & Asad, 2012; ChanLin, 2008; Cuevas, Lee, Hart, & Deaktor, 2005).

New Tech Network (2016), a national non-profit organization, partners with over 200 public schools in the United States and Australia by using project-based learning to "coach schools toward a lasting change and ongoing improvement" (p. 2). Entire schools in the New Tech Network are PBL-based, and New Tech has been growing since it began 20 years ago in Napa, California. The original New Tech High School is still open and

continues to grow. New Tech states their model and design is constantly evolving, making sure their students are exposed to the best learning and thinking. New Tech states their students grow 61% more in higher order thinking skills during their high school career when compared to other groups. In addition, 91% of New Tech students graduate, 9 points higher than the national average. While in college, 92% of New Tech students who enroll in four-year colleges move from their freshman to sophomore year. The organization stated that this attrition number has stayed consistent, although the number of schools partnering with New Tech has grown (New Tech Network, 2016).

New Tech Network (2016) reported positive statistics when it comes to school achievement and culture of their students. New Tech reported the following statistics from their middle and high school students: 82% are proud of their school, 83% are encouraged to be a strong learner, 87% believe they contribute positively to their school, 87% are learning to work well with others, and 93% are regularly working in groups in their classes (New Tech Network, 2016). In order to measure their growth compared to other schools, New Tech implements College Readiness Assessments developed by the Stanford Center for Assessment, Learning and Equity and Envision Learning Partners.

With over 62,000 students in 180 schools located in the U.S. and Australia, New Tech Network (2016) serves a diverse population in their project-based learning schools. 39% of the schools are in an urban setting, 24% in suburban, 19% in a town, and 18% rural setting (New Tech Network, 2016). 67% of the New Tech students are low income, with 33% being high income. 55% of students are minorities. 53% of the New Tech schools operate in their own buildings, with 47% sharing a building with another school.

Other studies focusing on specific classrooms have found that teacher willingness

to implement PBL is a key aspect to potential success. Tamim and Grant (2013) used six different classrooms in their study and reported the teachers found students to be more collaborative, motivated, engaged, and produced higher quality work while participating in a project-based learning unit. This study spanned various grade levels from 4 to 12. In addition, teachers were required to have at least one year of experience with PBL to qualify for the study. This ensured that novice teachers would not participate and require basic training on the PBL process. The results of the study stated that teacher perspective in PBL is one of the most important aspects to successful implementation. Teachers used PBL differently, depending on how it most benefited their classroom. One major implication is teachers need to willingly embrace a pedagogical approach for it be successful. All teachers in this study took it upon themselves to become trained and implement PBL, so they were motivated to make it work. Even if teachers faced challenges in the implementation, their motivation and beliefs allowed them to work through the problems (Tamim & Grant, 2013).

Middle school social studies classrooms have been the subject of a few previous studies, all concluding that PBL provides students with skills needed to be successful in the contemporary world. Grant (2011) researched middle school social studies students and their perspectives on the PBL process. The students participated in a unit of geography focusing on human rights. The qualitative study showed that these private school students understood the human rights unit quite well with a PBL approach. The students felt the unit was longer than necessary because they grasped the concepts before the end. An interesting observation from Grant was the teacher had to revert to traditional teacher practices more than intended due to student inexperience with the PBL process.

The students wanted to be self-directed learners, but they needed more modeling at the beginning of their unit. Hernandez-Ramos and De La Paz (2009) required students to create their own mini-documentaries in an eighth-grade social studies classroom. The students were given a six-week assignment with the researchers using both an experimental and control group. Before the students participated in the study, they did not have much variance in their content knowledge. The experimental group showed stronger gains in content knowledge when using a pretest-posttest design. However, students were not randomly allocated in this study, which impacted the validity. Researchers pointed out that the students seemed to be impacted in learning from each other, emphasizing critical thinking skills. Students also seemed to have better overall attitudes when it came to learning. In a similar study, Huberman, Bitter, Anthony, and O'Day (2014) stated that schools utilizing PBL saw significant increases in the students' ability to work in collaborative groups, retain long-term knowledge, and develop better intrapersonal skills.

Secondary science classrooms were the subject of other previous studies that also showed success resulting from PBL. Using a quasi-experimental study, Al-Balushi and Al-Aamri (2014) showed advancements in a science class by 11th grade students in Oman. The students in the experimental group out-performed the control group; however, there was a chance of novelty effect in the study. In addition, the researchers concluded that the time it took to plan and implement PBL was no more than other teaching practices. PBL can be implemented with few resources, probably no more than schools already use. Geier et al. (2008) stated that their results showed that an approach of developing specific inquiry-based curriculum yields higher achievement. This study used middle school science students and standardized test scores to develop their results,

stating that students who take control of their own learning are more likely to be successful. Hsu, Van Dyke, Chen, & Smith (2015) also used a science classroom to measure the impact of PBL, with this study using a computer-based unit. Similar to Geier et al. and Al-Balushi and Al-Aamri, overall content knowledge for the Hsu, Van Dyke, Chen, and Smith research increased for students participating in the PBL activities. Furthermore, the students' ability to argue their point also improved since they had a fuller understanding of what they had learned and how to apply it.

Numerous other studies focused on the impact of PBL on aspects of school outside of academic performance. Academics were discussed in a few of the studies, but the main topics were areas such as attendance, behavior, motivation, and engagement. First, PBL was shown to have a positive impact on attendance rate at impoverished schools (Creghan & Adair-Creghan, 2015). Using two schools for data collection, the researchers found that the students in a high school implementing PBL had a statistically significant gain in attendance rates compared to the control group, a high school of similar ethnic and economic makeup. This study of low socioeconomic students can shed light on closing the opportunity gap in the U.S. because PBL was proven to encourage students to attend school on a more regular basis. Once the students were in attendance, they were also more motivated to learn through the student-centered curriculum.

A few studies reported positive gains in student motivation and engagement due to PBL implementation. Jones, Hall, Thigpen, Murray, and Loschert (2015) studied rural high school students in Talladega, Alabama. 75% of the students in the study were on free or reduced lunch, and test scores were low. In addition, the researchers stated the teachers in Talladega were disengaged and would not do anything extra to help the school

before PBL was implemented. By using PBL, Talladega schools saw significant improvement in student engagement and graduation rate. Having students engaged in technology also amplified the students' skills needed to be ready for life after high school. Barak and Asad (2012) concluded that motivation and engagement of secondary school students increased with the use of PBL in a science classroom. The study used both boys and girls, with the girls' motivation increasing more than the boys. Boys are traditionally more interested in science at the outset, but it shows positive results in motivating girls. Doppelt (2003) also found motivation in science improving because of PBL, more particularly with low-achieving students. In addition to motivation, the students' self-image also improved because of PBL, combining to have more students reach college admission requirements.

Early American Schools' Use of Essentialism, Scholar Academic Ideology, and Traditional Teaching Methods

Early American schools were instituted to promote American culture and ideals (Spring, 2014). The founding fathers wanted an educated populace that could think for themselves and help make decisions in a democratic society. Thomas Jefferson (1832) states that education would allow citizens to be the "judge of the future; it will avail them of the experience of other times and other nations; it will qualify them as judges of the actions and designs of men." Jefferson and other founding fathers also wanted Americans to embrace Anglo-American values so that most of the population would all maintain the status quo (Spring, 2014). Thomas Jefferson (1779) proposed a bill for free public education and ensure that students would be "acquainted with Grecian, Roman, English, and American history." Although Jefferson wanted students to study and know history,

he only mentions European-focused history. Webb (2006) stated that the early American government wanted education so that the white population could intelligently vote for government representatives. Education was mostly for the elite, and schools were more concerned with a scholar academic ideology that showed more emphasis on curriculum facts than the individual (Spring, 2014). Spring (2014) identified the early rejection of cultural pluralism in the 19th Century United States because some thought "Irish Americans, African Americans, and Native Americans were a threat to the dominance of white Protestant Anglo-American culture in the United States" (Spring, 2014, p. 137). Prior to this in history, not many countries had been successful by having a multicultural population. The founding fathers were victims of their own society and values while trying to assimilate everyone to what they thought was the American way.

The scholar academic ideology discussed in Schiro (2013) fits the culture of these early American schools. Students were not necessarily supposed to think for themselves, but were able to read and write while recalling basic facts and events. This trend of ethnocentrism and basic thinking continued throughout the next few centuries, but educators like Horace Mann in the 19th century thought schools could help solve social ills in the United States (Spring, 2014). Mann thought education could help reduce crime, educate the populace about politics, end social class conflict, and eliminate unequal wealth distribution. Ebbs and flows of social reconstruction were seen in American schools with Counts (2013) first fully instituting the idea during the Depression. Under this ideology schools were supposed to identify and help solve the social ills most impacting the world. Students' individual experiences could be used in learning, and an individual's education was based on the smaller world that impacted

their lives.

Vogler and Virtue (2007) stated that current education, especially in social studies, is being influenced by the high-stakes standardized testing that has become commonplace throughout the country. First seen in *A Nation at* Risk from the United States National Commission on Excellence in Education (1983), accountability of schools was a priority in the current educational system. The best way to hold schools accountable was test scores, and therefore, high-stakes standardized testing was born. These standardized tests have created a return to traditional, fact-based, essentialist teaching methods that only skim the surface of Blooms' Taxonomy. High-stakes testing has continued to be part of the American school curriculum since 1983, especially with the No Child Left Behind Act of 2001 and Race to the Top Grant of 2009 (Croft, Roberts, & Stenhouse, 2016). Roberson and Woody (2012) said that these methods see students being fed facts from teachers, expected only to repeat them back on an assessment to show their knowledge and ability. More specifically, the researchers use an example of a student studying the Civil War who copied notes directly off the board for an entire week. When asked, the student could only say which side was good and bad but could not actually demonstrate what made each side classified as good or bad. Through these teaching methods, students only state a basic fact, they do not make a claim and back it up with actual evidence. Roberson and Woody (2012) further explain that the students could not specifically explain the causes of the Civil War or even begin to explain the significance of having the United States classified as a free nation. This surface knowledge without any context is not preparing students for the 21st century world they are expected to live and thrive in. Students are rarely asked to apply their knowledge to

practical experiences, and certainly do not take their own individual experiences and lives into their learning (Vogler & Virtue, 2007).

Implementation of Learner-Centered and Perennialist Thought

Problem-based learning (PBL) is a learner-centered ideology that allows students to use inquiry-based thinking to learn through the actual implementation of theories and concepts learned in class. Schiro (2013) stated that to the "uninitiated visitor, the ideal learner-centered school would look nothing like a traditional school" (Schiro, 2013, p. 99). This ideology focuses on the needs of the student and is not as structured and rigid as other ideologies and curriculum philosophies. PBL fits learner-centered ideology because although the teacher must first present ideas to the students, the creation and understanding of the final product is completely up to the student. Encouraging flexibility and personal experience, learner-centered ideology "has done much to humanize education over the last century" (Schiro, 2013, p. 148). Having varying influence over the years, learner-centered educators think their schools are truly the schools of tomorrow for everyone. These classrooms have shared responsibility for students, teachers, and curriculum developers. With students at the center, schools are "organized around the needs and interests of individuals rather than the demands of school subjects" (Schiro, 2013, p. 105). Students can choose their path within a given curriculum and the experience of researching what is most interesting to them allows the student to thoroughly research and analyze what is important to them.

An ideal learner-centered school is full of activity and students are expected to help in the construction of their own knowledge instead of a teacher being the expert and dictating what is important for the students to learn. For example, Schiro (2013) said in a

learner-centered school, "One might find adolescents acting out Greek and Roman myths through improvisational drama rather than just studying classics from a textbook" (Schiro, 2013, p. 109). One of the big advantages in learner-centered schools is the curriculum being based on the natural development of people. This allows for students to grow at their own pace and not worry about keeping up with their peers. With that, the curriculum takes an interdisciplinary approach to knowledge that allows for students to connect ideas from one subject to another subject. Traditional classrooms might teach isolated material that only allows for use within one class, but the learner-centered classroom expect students to understand how familiar ideas can relate to unfamiliar situations. Learning also changes as development continues because students take their preexisting knowledge to conceptualize new understandings of the world (Schiro, 2013).

Schiro (2013) says that teachers in a learner-centered classroom have three basic functions. Teachers should observe students and identify individual needs, set up an environment conducive to learning, and intervene with students who need assistance in their learning process. Teachers do not "attempt to simply mold individuals to conform to the expectations of society, parents, academic subjects, teachers, or politicians" (Schiro, 2013, p. 124). Teachers are true facilitators, and they must monitor and adjust according to the needs of each student.

Evaluation also looks very different in a learner-centered school (Schiro, 2013). Assessments and evaluation should still be focused on the students' personalized learning, and it “is not looked on favorably when it is used to inform someone other than students,” such as politicians (Schiro, 2013, p. 145). The justification of this is the recent push for standardized testing in American education. Standardized achievement measurements can

"have a negative effect on student learning" (Schiro, 2013, p. 146). Schiro states that these standardized tests have caused a rise in high school student dropout rates since students are required to pass these tests to graduate. Instead of summative assessments, learner-centered classroom use items such as portfolios and learning logs to measure individualized student growth over time.

Perennialists like Adler (1982) argue that education must transcend the school building and provide students with skills and abilities to help when they are in the outside world. School itself prepares students for life, and the skills learned should offer the ability to become lifelong learners. As opposed to learning only through texts and teachers, real learning happens through the individual experience of the student (Dewey, 1938). Students will take what they learn individually into the real world, and learning means something different for each person. Roth et al. (2014) conducted a recent study that found students using their own experiences through inquire-based learning significantly outperformed students using traditional instruction methods. According to TransformSC and the South Carolina Council of Competitiveness (2015), schools should develop a more student-centered curriculum that is based on real-world learning; anytime, anywhere instruction; real-time information; and competency-based grading to allow students to fit this *Profile of the South Carolina Graduate.* Teaching methods, such as Socratic seminars, show students "how to analyze their own minds as well as the thought of others, which is to say it engages students in disciplined conversation about ideas and values" (Adler, 1982, p. 29).

Theoretically, if schools implement new styles based on learner-centered and Perennialism, more students might have access to higher-level classes. In relation to

access, “first-generation, low-income students from underrepresented backgrounds are far less likely to enroll in AP classes in high school” (Contreras, 2011, p. 508). The Education Trust (2005) concluded that these underrepresented students who enrolled in AP courses were more successful in school when measuring performance and engagement. Many of these underrepresented students were never identified as gifted and talented in the first place due to varying identification methods across the United States and there are multiple ways to correct this error (Payne, 2011; Sleeter, 2005). Supports for students need to be in place from an early age, and simply identifying students does not suffice for the overall benefit of the child.

Inquiry-Based Learning

Inquiry-based learning is another teaching method seen in a student-centered classroom that allows for students to explore their own interpretations to questions instead of coming up with the exact answer a teacher wants. Studies have shown that this strategy, among others, increased overall class atmosphere, along with achievement and motivation (De Witte & Rogge, 2016). Specifically, Lent (2015) noted inquiry-based curriculum as one of the best ways to learn complex ideas since it focuses on students taking responsibility in their own learning and not just understanding what a teacher explains. Students must provide their own evidence from primary and secondary sources to show understanding, and that type of critical thinking is most certainly part of the 21st century skills needed in the contemporary world.

21st Century Learners

Suh and Hargis (2016) show how the millennial generation, people born from 1980-2000, respond better to a more flexible school and work environment. Millennials

are very adaptive and are more likely to have multiple careers compared to previous generations. Jobs of the 21st century require 21st century skills, but current Essentialist and Scholar Academic schools are not cultivating these skills. Schools need to stress skills like critical thinking, collaboration, and problem solving, which are most important when thinking of the future needs of the globalized world (Suh & Hargis, 2016). Due to this flexibility, the researchers gave a "call to educators' creative ability to look at a subject in different perspectives" (Suh & Hargis, 2016, p. 16) to provide the best learning experience possible. The researchers found the physical environment created a more positive learning atmosphere, stating items such as natural light and furniture can be very influential. PBL requires various types of furniture in a classroom, so students can move around rather than sitting at one desk for an hour. Millennials are more active people and learners, so a classroom using a PBL model would be more conducive to their education.

Farisi (2016) stated that a social studies classroom can easily teach 21st century skills using technology. The teacher acts as more of a facilitator in this case because they need to be able to model and provide feedback for the students' use of technology. Using Farisi's (2016) ideas, the teacher's role is much different than the traditional classroom in the United States. No longer is the teacher just an expert on knowledge and content, but they too must be able to apply their knowledge so that students can do the same. This idea supports PBL, because teachers must first set a precedent for the students so they can learn from both their successes and failures. Teachers must find new ways to have student demonstrate understanding, because personalization means that students will still be learning the same concepts, but the details might be slightly altered depending on the students' unique experiences.

Student Self-Agency and Individualization

Students becoming advocates for themselves and developing self-agency is at the heart of PBL (New Tech Network, 2016). Dweck (2008) states that for students to become true self advocates, a change in mindset is necessary. Dweck states there are two mindsets: fixed and growth. A fixed mindset is described as someone thinking their "qualities are carved in stone" (p. 6). Instead of a fixed mindset, Dweck stated that it is better to have a growth mindset where "everyone can change and grow through application and experience" (p.7). This is key in PBL as students learn and adjust through experience. Everyone will not change at the same time, and no student will be penalized for gaining mastery slower than another.

Self-agency in PBL means students do not rely on the teacher for all knowledge. Instead, base knowledge is provided from the teacher before students explore certain subjects on their own. This type of self-directed learning allows students to focus on what is more important to them as individuals instead of having a prescribed curriculum the teacher follows step by step. Having this flexibility opens the door for real-world application for each student. Students can choose local issues or topics for their projects and gain firsthand knowledge of how the information applies to their world (Kokotssaki, Menzies, & Wiggins, 2016; Larmer & Mergendoller, 2010).

Social Justice

Although advocates of high-stakes testing have claimed the tests will help close the opportunity and achievement gap between the white majority and their non-white counterparts, studies show that a homogeneous curriculum has developed that ignores the knowledge of other cultures (Sleeter, 2005). More importantly, there is an opportunity

gap because traditionally marginalized students have not had access to the same opportunities in upper-level classes. The high stakes testing era of No Child Left Behind has created an opportunity gap where traditionally marginalized students are at a disadvantage with the ability to achieve (LaCour, York, Welner, Valladares, & Kelley, 2017). However, the implementation of broadening and enriching curriculum, such as upper level classes using PBL, might be able to close the opportunity gap for students traditionally underrepresented in upper level courses (LaCour et al., 2017).

Evidence of the opportunity gap and its negative impact on American Schools. Traditionally marginalized students have an opportunity gap in traditional American schools that is caused for reasons such as teachers not recommending students for higher level classes, lack of resources for the school, or test scores that do not meet a minimum requirement (LaCour, York, Welner, Valladares, & Kelley, 2017; Milner, 2017). The No Child Left Behind era has caused an emphasis on test scores that has further marginalized these students (LaCour, York, Welner, Valladares, & Kelley, 2017). Braun, Chapman, and Vezzu (2010) state the opportunity gap in the United States is still a significant problem, even after the No Child Left Behind Act (NCLB). Cokley and Chapman (2008) build upon the opportunity gap argument and state that "academic achievement among African American students, arguably, represents one of America's most urgent educational issues" (p. 350). The reality that traditionally marginalized students appear "to have, on average, substantially lower skills than the majority group raises worries both about global economic competitiveness and the equitable distribution of economic opportunity and social mobility" (Braun, Chapman, & Vezzu, 2010, p. 4). Analyzing 10 U.S. States from 2000-2007, the researchers set to determine the impact of

NCLB and new state initiatives to close the opportunity gap between white and black students. The policies that went into place in each U.S. State during this time had a very modest impact on the opportunity for all students to achieve at a high level, and the researchers suggest some changes moving forward. Specifically, the measurement of closing the achievement and opportunity gap should not rest solely on standardized test scores. Instead, there should be other forms to measure achievement and success.

Having such a low percentage of minority students in AP classes was not only a disservice to them, but also the white majority. As stated by Scheid and Vasko (2014), many white students enter their undergraduate years without a true understanding of the diversity in the United States. These students only have knowledge of other minority groups from a classroom with people just like them, talking about different worlds many of them have never experienced. With that, the AP Academy has developed a recruitment initiative to boost the number of non-traditional students, and quickly found out that many of the students were suffering from something called internalized oppression (Tatum, 2013). According to Payne (2011), different school districts in the U.S. have various ways of identifying gifted and talented students, but most of methods still used traditional teaching and assessment for identification results. This left out large segments of talented students, but a student-centered classroom using the PBL model could possibly help identify more students and provide them with a learning environment that helps them develop as successful learners. Implementing student-centered classrooms with teaching methods like PBL will allow for previously underrepresented students to be in an environment that will allow them the time to work through the curriculum and obtain the higher-level thinking skills.

Ethnic identity and understanding differences are important in students being successful. Unfortunately, there are many examples of American schools not understanding and embracing these differences. Charbeneau (2013) states that whiteness is not isolated. Instead, "covert socialization into white dominance occurs rather universally" (Charbeneau, 2013, p. 655). Teachers and faculty are not immune to whiteness, and it is often embedded in policies and procedures. Charbeneau's research analyzed higher education white faculty members attempts at transformative methods of addressing whiteness among the faculty and classroom. The faculty members reported positive results, although at times implementing transformative approaches was difficult. Students could disagree because more interaction was encouraged. Traditional pedagogical approaches are characterized by the teacher dominating conversation without the chance for participation from the class. However, using a transformative method allowed more than one opinion to be heard. DeCuir-Gunby's (2009) assert that "African American adolescents should not be viewed as a monolithic group and there is "no one African American experience" (p. 116). There have been millions of African American students who have shown success in American schools. It is important as educators that we do not expect one cultural or ethnic group of students to perform the same. I had an African American student tell me one time that she was tired of being the voice of all African Americans in her classroom. She said being an AP and honors students in our high school often meant she was the only African American student in her classes. Teachers and students would often ask her to give the "African American" opinion and this makes me cringe. Although the research of self-concept's correlation to feelings

toward school had much of the same results and discussion, it does not mean that teachers should hold different expectations for an entire group of people.

Positive impacts of social justice and ways to close the opportunity gap. Hackman (2005) states that "social justice education encourages students to take an active role in their own education and supports teachers in creating empowering, democratic, and critical educational environments" (p. 103). Halvorsen et al. (2012) conducted a study that shows students from a low SES school achieving at the same level as students from two other high SES schools after using a PBL unit. This implies that students in low SES schools can achieve as much as other students when given a non-traditional learning task.

Corcoran and Silander (2009) provide practical solutions to helping close the achievement and opportunity gap. The researchers state that new federal requirements have put a unique challenge on American schools: all students must have academic success. To do this, traditional structure of schools might need to change. For example, having classes isolated to one subject should give way to interdisciplinary lessons that allow students to make connections across subjects. One way the researchers state schools can accomplish this is through Project-Based Learning (PBL). PBL allows students choice in their learning through a project that is completed over a long period of time. This sustained learning will allow for students to see connections in their learning to real life situations. Allowing students to interact with each other during any learning strategy is a key, and this could help the students who have show academic struggles in the past. These students could be very smart, they just did not succeed under traditional assessment practices.

New Tech Network (2016) serves a diverse population in their project-based learning schools. Overall, 67% of the New Tech students are low income, and New Tech states their students grow 61% more in higher order thinking skills during their high school career when compared to other groups. In addition, 91% of New Tech students graduate, 9 points higher than the national average. While in college, 92% of New Tech students who enroll in four-year colleges move from their freshman to sophomore year.

Although not directly related to student-centered teaching models like PBL, Kahne (2009) outlines closing the opportunity gap by exposing students to real world problems. An essential to the PBL classroom is having students interact in real world situations, and Kahne explains the simple availability of options for engagement will help close the gap. Increased teacher training and collaboration could motivate students to set higher goals than previously identified.

My school was guilty of participating in this era of inequality in schools but has taken steps to try and change that. Three years ago, the high school developed an AP Academy to provide students with the support needed while taking the most rigorous courses possible. The AP Academy dramatically improved AP enrollment numbers, but teachers started to notice the demographics of the school did not match the demographics of the AP Academy. Although 20% of the school's students were minorities, only about 5% of the AP students consisted of minorities (PowerSchool, 2018). I helped develop a team in my school that is trying to reverse this trend for traditionally marginalized students. My school is the only high school in our city and we have partnered with the feeder middle schools to create a task force that intends to increase the number of traditionally marginalized students in upper level classes. Together we had parent and

student meetings to understand the disconnect because we have identified extremely intelligent and capable students who are not enrolled in classes they would benefit from. The work is ongoing, and we hope to continue making progress for the years to come.

Historical Context

To understand the need for change in contemporary American schools, it is first necessary to understand the history of American schools. For the present research study, I measured the impact of project-based learning in AP Human Geography and to understand that impact it is necessary to see what schools have done in the past. American schools have not changed much since their beginning and have mostly followed an essentialist teaching method that emphasizes basic facts and memorization. The following will outline the curriculum and ideological movements of American schools from the founding until the present.

Goals of Early American Schools

Early American schools focused on citizens being good and patriotic Americans (Spring, 2014; Webb, 2006). Schools were first meant for the elite, but Benjamin Franklin was one of the first Americans to suggest schools should be for everyone and not just the wealthiest citizens (Franklin, 1976). Spring described early American schools as assimilating minority cultures to make sure they followed Anglo-American ways. Without this, the government feared that minorities might foment rebellion and not support decisions from the federal level. Thomas Jefferson summed up the idea of government feelings by saying that "education should provide the average citizen with the tools of reading and writing and that political beliefs should be formed through the exercise of reason" (Spring, 2014, p. 54). Critical thinking was not on the radar for these

early American schools. Basic reading and writing was most important, and the government did not rely on the citizens to do too much thinking outside of that.

19th Century Ethnocentrism and Basic Education

Creating schools to provide basic, ethnocentric knowledge continued into the 19th century. Schools were still focused around Essentialist theory, Social Efficiency, and Scholar Academic ideology. Educating all Americans to adopt and entrench the Anglo-American culture was the number one priority of schools (Spring, 2014). The early rejection of cultural pluralism in the 19th century United States was justified because "Irish Americans, African Americans, and Native Americans were a threat to the dominance of white Protestant Anglo-American culture in the United States…" (Spring, 2014, p. 137). More specifically, Spring stated that "the common school movement of the 1830s and 1840s was, in part, an attempt to halt the drift toward a multicultural society" (Spring, 2014, p. 106). Some 19th Century Americans saw other cultures, specifically the Native Americans, as "savages" and did not want them in the same school. After the Trail of Tears, Native American tribes had to create their own schools on reservations. Some anthropologists argue the Oklahoma Cherokees literacy was even better than nearby white populations (Spring, 2014). Initially, Irish Catholics were rejected due to the possible threat against an Anglo-American Protestant education, but other groups were also discriminated against for reasons such as ethnic differences. These discriminated groups took matters into their own hands and tried to change things in their new country for the better. Catholics, mostly Irish at the time, were so appalled by the treatment of the Protestants they created their own schools. Schiro states that created an odd tax situation because Catholic parents were paying taxes for the common public

schools that were teaching Protestant ideals but were also paying for their children to attend private Catholic schools. Parents were trying to escape public schools by sending their children to private schools, but they could not change the tax situation. More importantly, it continues to show the disfunction of the public school system as a whole.

19th Century Industrialization and the Impact on Schools

A push toward Social Efficiency ideology that emphasized math and science gained momentum in the mid-19th century (Schiro, 2013). As cited in Spencer (1860), science should take the place of classics because the industrial society that was about to take over the United States required workers that had skills other than reading and writing. Spencer (1860) agreed that citizens should be educated on civic information so they could intelligently vote, but ultimately education needed to be more structured on what society needed. Spring (2014) suggests that at this time, there was a need for schools to teach industrial ideas and values. Since industry was becoming more important in the U.S. in the 19th century things such as attendance and punctuality "were considered important by school people for the management of educational systems and as values to be taught to schoolchildren in preparing them to function in society" (Spring, 2014, p. 152). African Americans were denied the right to attend these schools during he 19th century, but the work of people like Booker T. Washington and W.E.B. Du Bois created schools where African Americans could learn valuable skills (Spring, 2014). Washington's creation of the Tuskegee Institute created a practical education for African Americans. Unfortunately, the schools were segregated by both race and money. By 1900, All funding for education went to white schools, and African Americans had to provide education in any way possible. These schools championed by Washington and

Du Bois still produced students who could live a practical life even if white southerners "considered education a direct threat to their use of black children as agricultural laborers" (Spring, 2014, p. 190).

Changes in the 20th Century

In the early 20th century, American schools began to move away from just equipping students with basic skills and theorists started to think about how schools could help society. George Counts (2013) ushered in Social Reconstruction ideology which suggested education should help society through the individual student. Counts' 1932 speech was given right in the middle of the Great Depression, so he thought schools would most benefit by trying to find solutions to the economic disaster the United States was currently experiencing. Along with this idea, the Commission on the Reorganization of Secondary Education laid the groundwork for the modern comprehensive high school (Spring, 2014). These comprehensive high schools started looking at societal problems but still concentrated on basic education such as reading, writing, math, and science seen in previous decades. The Commission on the Reorganization of Secondary Education had ties to social efficiency because it "attempted to shape the high school to meet the needs of the modern corporate state" (Spring, 2014, p. 241). Although Booker T. Washington and W.E.B Du Bois created schools that provided practical education for African Americans in the 19th century, the Commission on the Reorganization of Secondary Education still did not meet the needs of traditionally marginalized populations in the United States (Spring, 2014). It was not until the mid-20th century with *Brown v. Board of Education of Topeka* that African Americans were allowed to attend school with whites (Spring, 2014).

While writing in the 20th Century, Pinar (2013) argued that curriculum needed a change because it was outdated. This reconceptualization of curriculum predicted that "the field of curriculum studies will be profoundly different in 20 years' time than it has been during first 50 years of existence" (Pinar, 2013, p. 149). Curriculum will take more of an individualized approach and not focus on the teacher as the expert in the classroom. Business and industry models, previously emphasized in American schools, did not allow for enough personal experience and flexibility in the curriculum. However, Pinar did not suggest that modern education should reject the old ways of thinking. In contrast, Pinar stated that to be successful, the educational world "must strive for synthesis, for a series of perspectives on curriculum that are at once empirical, interpretative, critical, emancipatory" (Pinar, 2013, p. 155).

Teachers in a learner-centered ideology are not de-skilled, but their skills are just readjusted. As mentioned by Schiro (2013), teachers in a learner-centered classroom are responsible for seeing what students are accomplishing and redirecting them to what best fits for the students individually. Apple (2013) stated that current teachers have been influenced by things such as standardized tests and do not focus of the teaching profession itself. Government and legislature make decisions about what is important in education without consulting educators. Therefore, teachers focus on benchmarks that need to be reached instead of how to best benefit their students' personal experiences and growth. Apple (2013) suggested that there is a false sense of increased professionalism with the increasing technical and intense atmosphere of teaching, but teachers do not have much influence to change anything right now.

Education for the 21st Century

Contemporary American education has focused on standards-based curriculum and high-stakes standardized testing the last few decades (Lefkowits & Miller, 2006). This return to Scholar Academic and essentialist education theory have created robots as teachers who just teach to the test and do not focus on developing students as independent thinkers. Apple (2013) said that teachers are "more and more faced with the prospect of being de-skilled because of the encroachment of technical control procedures into the curriculum in schools" (p. 167). Lefkowits and Miller (2006) state that the one-size fits all approach has been rejected by various organizations, and "there probably is no silver bullet that will close the achievement gap" (Lefkowits & Miller, 2006, p. 405). Legislation passed in the 21st century has created classrooms that resemble learning from decades before. Arce, Luna, Borjian, and Conrad (2005) analyzed No Child Left Behind Act (NCLB), signed into law in 2002, to see what organizations and individuals have benefited most from the law. NCLB was intended to benefit low income schools and students, but the researchers ask why these traditionally struggling schools were so quick to comply to the high accountability involved with the act. Although the law was intended to provide all students the same opportunity to achieve at a high level, the results have not been as positive as hoped. Since standardized testing was a major part of NCLB, the large corporations that control these tests (i.e. McGraw Hill and Pearson) started to expand. Low-performing school districts are arguably the biggest losers because they are now forced to use these testing companies for test preparation. Teachers are forced to teach specifics of the test, not necessarily research and thinking skills. Although meant to help school performance, "under the veil of NCLB, the federal government holds school districts hostage" (Arce, Luna, Borgia, & Conrad, 2005, p. 64).

Local agencies and school districts must individualize and personalize curriculum for all students to have equal opportunity to achieve. There are too many differences across the country to come up with one specific solution to the problem. Schools should still be held accountable for their performance, but the researchers state that the community needs to have a vested interest in the progress or schools are doomed to fail. However, lawmakers and other decision makers seem to have different values when it comes to education, and high-stakes testing does not seem to be losing steam anytime in the immediate future. Fact-based curriculum is still at the heart of most school districts in the United States because so much time and money is invested that it is very difficult to change overnight. Vogler and Virtue (2007) stated that the push for high-stakes standardized testing is harming the teacher-student relationship. Teachers see students as test scores and not actual people. Teachers know that bad test scores can cause harm to their career, so they have no choice but to teach exactly what is going to be on the test.

Moving toward an acquisition of 21st century skills and away from teaching facts and basic knowledge, Charleston County School District Office of Assessment and Evaluation (2015) have demonstrated early success in the implementation of student-centered learning, like PBL, in selected schools. This instructional method has shown increased student engagement, responsibility, and performance. At one particular school, the failure rate of Algebra I has decreased 40% (PowerSchool, 2018).

Keywords

Advanced Placement (AP): The CollegeBoard (2003) defines Advanced Placement courses as the following: "AP courses offer rigorous college-level curricula and assessments to students in high school. The program sets the standard for

academic achievement in 34 courses and offers extensive teacher professional development" (CollegeBoard, 2003, para 1).

High-stakes testing: Tests developed for accountability and can be attributed to No Child Left Behind (NCLB), Race To The Top (RT3), and Common Core (Croft, Roberts, & Stenhouse, 2016).

Project-based learning: "a systematic teaching method that engages students in learning essential knowledge and life-enhancing skills through an extended, student-influenced inquiry process structured around complex, authentic questions and carefully designed products and tasks" (Grahame, 2011, p. 95).

CHAPTER 3

METHODOLOGY

Action research is conducted by teachers for use in their own classroom (Mertler, 2014). Action research is appropriate for this study, because I implemented the project-based learning (PBL) teaching model in my own classroom to help students gain the higher-level thinking skills needed to be successful on the AP Exam. These higher-level thinking skills are best taught in a student-centered classroom through inquiry-based questioning. PBL and the personalization of learning allows for modern students to gain skills like critical thinking and collaboration (Suh and Hargis, 2016). This chapter will fully explain the purpose of the study, state the problem of practice, and describe the research design implemented.

Purpose Statement

The purpose of this action research study was to implement project-based learning (PBL) in my Advanced Placement (AP) Human Geography class to improve the students' perspective of their own learning. I intended for students to learn how to understand information on a deeper level, not just know basic facts and definitions. I used PBL's inquiry-based learning, which helped students develop "intrinsic motivation and learn to think strategically about core academic concepts" (Lent, 2015, p. 104). De Witte and Rogge (2016) stated that inquiry-based learning has proven to increase achievement,

motivation, and overall class atmosphere. Obtaining these skills will allow students to think outside of the box and apply familiar concepts to unfamiliar situations. As stated by Adler (2012), "Skills cannot be acquired in a vacuum" (p. 26), and PBL may allow students to connect ideas across disciplines and become better critical thinkers overall.

Problem of Practice Statement

The identified problem of practice for the present action research study involved high school students learning the higher-level thinking skills needed to be successful citizens after high school graduation. The specific problem is that many educators in South Carolina are using teaching methods that do not cultivate higher-level thinking skills; instead, they use teaching techniques that cater to surface information and memorizing facts for success on standardized tests (Mehta, 2013; Vogler & Virtue, 2007). In the last few decades, American education has focused on standards-based high-stakes testing that has caused teachers to change their teaching practices (Lefkowits & Miller, 2006). These standardized tests have caused teachers to revert to essentialist theory that relies on memorization of basic facts. These facts are only surface knowledge, such as the ability to recognize terminology, dates, or specific elements in a curriculum. Absent from curriculum, especially in the social studies classroom, are higher level skills on Bloom's taxonomy. The lawmakers who backed the standardized test movement seem to have a different value on the current high-stakes testing and fact-driven curriculum than the public (Lefkowits & Miller, 2006). When my students first enter my classroom, they struggle to go beyond simple memorization. Our first test of the year is always a shock to their system, even when I stress the need to use analysis and creativity in the

studying process. I see this struggle each year, and it is evident most students rarely had to utilize high-level thinking in the past.

Silva (2009) stated that higher-level skills in education are characteristics such as creativity, innovation, integrity, self-direction, work ethic, and collaboration experience. Adler (1982), a perennialist, stated that the "enlargement of the understanding" is "a mode of teaching and learning that has all too rarely been attempted in the public schools" (p. 28). However, this "enlargement of the understanding" taught through inquiry and questioning is exactly what produces skills needed to be successful in the contemporary world. Therefore, teachers need to use methods that cultivate this type of thinking to prepare students effectively. Curriculum should be centered on analysis and creation. For example, instead of just memorizing a hypothesis, students should be taught and possess the skills to explain why a specific hypothesis might be wrong and suggest an alternative theory (Anderson & Krathwohl, 2001). Students should have a basic knowledge of events and ideas; Crocco and Costigan (2006) argued that instead of helping public education, high-stakes standardized testing might be destroying it. Teacher accountability for test scores gives teachers no other choice but to teach to the test, and federal mandates have focused on math, English, and science for testing purposes. Noticeably absent is social studies, commonly thought to be one of the four core subjects. Some U.S. States have added social studies in the testing mix, but those tests are also focused on mainly content-based fact questions. Some social studies teachers have called their high-stakes assessment curriculum a "forced march" where they do not have room for deviation and meaningful student-centered assignments (Crocco & Costigan, 2006). A continuation of this will not allow for teachers to provide the higher-level thinking skills

needed to be successful in the 21st century, and "the study of social studies will become nothing more than the ability to regurgitate a collection of facts listed in a state-mandated curriculum framework" (Vogler and Virtue, 2007, p. 57).

Action Research Design

This action research study aimed to increase student perspective of their own learning in AP Human Geography by implementing the project-based learning (PBL) teaching method, which has the potential to assist students in gaining critical thinking and creativity skills. During the 2017-2018 school year, I used an exploratory mixed-method design to determine the impact of PBL on student learning perspective and achievement. Field notes, observations, and interviews were types of qualitative data collected (See Appendix B for qualitative instrumentation tools). Quantitative data was obtained by using assessment scores, surveys, and student activity logs (See Appendix C for quantitative instrumentation tools). The study consisted of two phases: a PBL assignment in each unit of study throughout the school year and a PBL assignment that assisted in reviewing and studying for the AP Exam on May 18, 2018.

Identifying the Problem

The first step in action research is identifying the problem and area of focus (Mertler, 2014). The problem of the current study is how to equip students with the high-level thinking skills needed to be successful beyond high school. Since the mid 1950s, many classrooms in the United States have relied on essentialist teaching approaches that rely on memorization of facts students can now easily find with ready access to the internet (Roberson & Woody, 2012). This study will look at the impact of PBL as an avenue for students to obtain higher level thinking skills and be successful on the AP

Human Geography Exam. My high school is adapting curriculum throughout the school for students to obtain these higher-level thinking skills and be ready for life after high school. These skills, such as creativity and critical thinking, are taking new priority, and a more individualized educational experience will help with the acquisition of these skills (Silva, 2009).

Research Site

I am employed at a large high school in a coastal South Carolina city. With an enrollment of 4,054 students, the demographics are 82% White, 11% African American, 3% Hispanic, 2% Asian, 2% two or more races, and less than 1% other. The number of non-whites at the high school has decreased in the last few years due to changes in the federal No Child Left Behind Act. 24.1% of students at the high school are on free or reduced lunch (PowerSchool, 2018). There has been a recent push toward student-centered learning in my school, but not many classrooms are fully implemented. Four social studies teachers in my school have created units with PBL characteristics, and my class was the first to attempt a full PBL curriculum.

Participants

The participants in the present action research study were my freshmen AP Human Geography classes. Students can take AP Human Geography at any grade level at my high school. At my school, 38.4% of the overall students at the school are enrolled in an AP course. Therefore, attempts have been made to have the top students enroll in upper level class early in their career so they become accustomed to the AP environment. The top 8-10% of freshmen are identified as good candidates for AP Human Geography enrollment by using test scores, middle school grades, and teacher recommendations.

Since maturity and experience levels are very different, freshmen are in a separate class from the sophomores, juniors, and seniors to create a better learning environment for everyone. The 2017-2018 school year is the eighth year the high school has offered AP Human Geography. The freshman enrollment in AP Human Geography has steadily increased each year with 45 students the first year in 2010-2011 to 207 students in 2017-2018 (PowerSchool, 2018). The 2017-2018 school year is unique because it is the first year my school has allowed parents to override the recommendations for their child to take AP Human Geography as a freshman. In previous years, our administration has told students and parents they can wait until their sophomore year to enroll in the class if they did not meet the recommendations for the freshman year.

For the 2017-2018 school year, there were three AP Human Geography teachers at my school, and there were 30 students for the present study. The 30 participants were chosen after I administered our class final exam a week prior to the AP Exam. The class final exam is structured like the AP Exam and serves as practice for the students. The class final exam was created by using old AP Exams as a basis and the questions have similar levels of thinking according to Bloom's Revised Taxonomy. I chose the 15 students with the highest scores and 15 students with the lowest scores on the class final exam to be the participants. All my students are considered high achievers in our school since they took on the challenge of an AP course during their freshman year, but some still performed better than others. On the final exam, all the top 15 students received a grade somewhere between 93 and 100 while the students in the bottom 15 scored between 73 and 77. This selection of the top 15 and bottom 15 scorers was purposeful so I could see how PBL impacted students who were the most and least successful in the

class according to their teacher-created class final exam. The class final exam is structured like the AP Exam and consists of 75 multiple choice questions and 3 free response questions. Each of the two sections are worth 60 total points, and the students receive both a composite score and AP score. The composite score is the sum of the two sections, and that is converted to an AP score after the scores are translated to the score chart (See Appendix D for more information on the scoring sheet). Of the 30 total students, 18 were female and 12 were male. There were 27 students who identified as white, one student who identified as Asian, one student who identified as Hispanic, and one student who identified as mixed ethnicity. There were two English as a Second Language (ESOL) students and one student on free or reduced lunch. The top 15 scorers consist of 10 females and five males. Within that group, there were 13 students who identify as white, one student who identified as Asian, and one student who identified as mixed ethnicity. The bottom 15 scorers consisted of eight females and seven males. Within that group, there were 14 students who identified as white and one student who identified as Hispanic. The two ESOL students and one student on free lunch were in the bottom 15.

Role of the Teacher-Researcher

Unlike traditional research, I was both a participant and observer in the action research process. This role allows for a different focus because "the goal of action research is to improve, not our theories, as in physics or molecular biology, but our practices, as in medicine and engineering" (Toulman, 1996, p. 58). During the implementation of PBL, I was imbedded in the process to reflect upon my own teaching practice and improve the learning of his students. Designing and implementing the

strategies, I looked at the class as an outsider at times to judge objectively the type of learning to which students are being exposed. Field notes were taken daily during the student's work time so that I could see any trends within the classroom. The field notes were also used to track progression of the student's completion of quizzes and assignments. Students were given freedom to move through the review at their own pace, and I wanted to see how efficient their work ethic was.

One of the more difficult aspects of being both the teacher and researcher of the present study is conducting the study in a high-stakes AP course. I teach at a school in an affluent community with very active parents. Our AP program is traditionally very successful, and parents expect their children to perform well on the AP Exam so they can possibly earn college credit for the course. Although I implemented PBL in the exam review process, I still had to ensure my students were acquiring the knowledge and skill necessary to do well on the exam. Traditional PBL has an inquiry-based quality to it where students have autonomy and are responsible for working themselves out of problems to find solutions (Kokotssaki, Menzies, & Wiggins, 2016; Larmer & Mergendoller, 2010). I had limitations when it came to allowing students to struggle for too long because they had to be ready for the AP Exam. I still allowed students to think through their problems during the PBL process, but I gave them more feedback and direction than would be expected in traditional PBL units. My students still became self-directed learners with large amount of autonomy; I just had to help guide them a little more along the way.

Instrumentation and Data Collection

The second step in action research involves the collection and analysis of data (Mertler, 2014). I implemented PBL in the AP Human Geography classroom to give students the skills and knowledge to perform well on all assessments in the course, culminating with the AP Exam in May. Students moved through each curriculum unit at their own pace, with a teacher-mandated deadline for the summative assessment for each unit. Central to the study is the students' perspectives and self-awareness of their own learning. I sought to help change the students' knowledge of what is important in the learning process and how that can help them in the future.

The present study used an exploratory mixed-method design that uses both qualitative and quantitative data to determine the impact of PBL on student learning perspective and achievement in AP Human Geography during the 2017-2018 school year. At the beginning of the school year, I gained permission to conduct the study from my school and provided parents and students a consent letter. Early in the school year, my students completed a survey on their experience in previous social studies courses. Other data collection was obtained in the six-week period before the class final exam and AP Exam. Qualitative data collected were field notes, interviews, and observations. Quantitative data collected were from surveys, student activity logs, and summative assessments. The class final exam assessment, which serves as preparation for the AP Exam, was administered one week before the AP Exam. I created the class final exam, and the questions cover many levels of thinking as measured by Bloom's Revised Taxonomy. To keep the level of questions according to Bloom's consistent with the AP Exam, I used previous AP Exams as a model for the creation of my questions. Using

three old exams, I tried to duplicate the level of Bloom's Revised Taxonomy question by question. For example, if an old exam had nine questions with analyzing and using conceptual knowledge, I tried to write the same amount of questions for my assessment. Similarly, I kept the lower level thinking questions the same percentage. If there were five questions with remembering and using factual knowledge, I tried to duplicate that as well. With students being exposed to PBL before full implementation in March, I saw the acquisition of higher-level thinking skills based on assessments and practice exam scores, because the exam revolves around critical thinking (College Board, 2015) (See Appendix B and C for instrumentation tools).

Gradual implementation of project-based learning. Because a student-centered, PBL classroom was most likely a different learning environment for AP Human Geography students, I gradually implemented the teaching model so my students would be comfortable with it while using PBL to help prepare them for the AP Exam. The AP Human Geography course at my school is taught during a 45-minute period for the entire school year. Implementation happened in two phases: a project in each curriculum unit throughout the year and a project that assisted in studying for the AP Exam. Phase one occurred from the beginning of the school year until the end of March. Phase two happened from the end of March until May 12. In this phase, the students used the AP Human Geography Curriculum Articulation to progress through main ideas and concepts in each unit to demonstrate understanding (see Appendix E for a sample of the AP Human Geography Curriculum Articulation).

In phase one of the implementation process, direct instruction still occurred, but entire class discussions only took place 10-15 minutes per class period. My students were

given a calendar of activities and due dates at the beginning of each unit. Students could work through the assignments at their own pace, with information being frontloaded in a flipped classroom model. I recorded teacher-led PowerPoint presentations to give my students a foundation of information, but whole class discussion still occurred to ensure students understood major concepts from each unit. This whole class discussion consisted of me questioning students about the main concepts and asking them to provide examples of how these concepts applied to the real world. While working at their own pace, students were responsible for completing assessments such as reading quizzes, maps quizzes, and other activities that will be part of the "working playlist" on any given class day. Students needed to be self-directed when it came to due days and responsibilities on these items and could also work ahead if their assignments have been completed. Upon completion of each topic, students were expected to apply their knowledge through a PBL assignment called *Sovereignty*. Each day, students completed an activity log that allowed them and me to track their progress. The activity log required them to reflect on key concepts they concentrated on that day; rate their own work ethic, growth, and use of time; and maybe most importantly, state what they were going to work on the next day.

For the *Sovereignty* project, students were given one of six "newly created" countries in the world and applied the concepts and ideas from class to their country's development. Using various research methods, students examined surrounding countries in their region to develop their own country based on the curriculum's concepts. For example, when we were in our culture unit, students were responsible for researching the various cultures in the countries surrounding their *Sovereignty* country to develop their own culture. If a student had a country in Southeast Asia, they would have to research

and create cultural traits such as their own language, food customs, and religion based on real Southeast Asian countries. Their research information and own personal experiences allowed students to create their country for what suits their lives, opinions, and values. Each quarter, students were given a set of required elements, but with many choices built in (for more information on the *Sovereignty* project, see Appendix F). I provided options such as the creation of a website, blog, physical model, etc.; however, students could create their own unique product to show their understanding if it was first approved by me. Periodically during each unit, I set up checkpoint days when students met with me individually to talk through their unit and *Sovereignty* progress. Students were required to have a rough draft of the project they chose for their product and I would provide feedback so they could edit and add to their project.

Phase two of implementation was when students used PBL to review and study for the AP Exam. Students used their country from *Sovereignty* to create their own product that shows understanding and application of key concepts needed to be successful on the AP Exam. Students were given access to copies of the AP Human Geography Curriculum Articulation and went back through each unit at their own pace. Students had to choose two main topics from each unit of which to concentrate, and the topics had to be broad enough to apply within and across units of study. Broad topics also ensured students would think comprehensively enough to know all of the required information to be successful on the AP Exam. Checkpoint days were also included within this phase, and they became even more important than before. During checkpoints, I questioned students about their choices to ensure they understood exactly how the concepts they were working on fit into the bigger picture of the class. Since students were

reviewing the information from the entire year, it was important they were thorough and understood how each key concept related to their *Sovereignty* country. Because student choice and self-direction are a large aspect of PBL, the students had multiple ways they could prove their understanding in both phases. Research skills and collaboration were essential because students were encouraged to work with others in class to understand what was happening in different places of the world.

In PBL, students are expected to be self-directed learners, so I did not want to delay the progress of one student when another student required more assistance and support (Charleston County School District Office of Assessment and Evaluation, 2015). During each phase of implementation, I monitored the learning objective each student was working with each day by analyzing the daily student activity log. By doing this, I could pull aside a group of students for small group instruction if they were struggling on the same learning objectives. The checkpoint days were vital to student success because they could modify and adjust their products according to my suggestions.

Ethical Considerations

The National Education Association (NEA) Code of Ethics are based on two principles, including: "a commitment to the student and a commitment to the profession" (Dana & Yendol-Hoppey, 2014, p. 148). My school district clearly outlines the process for approval of research studies and ethics (Charleston County School District, 2016). I used an informed consent form to make sure all participants know the intent of the study, description of those involved, and most importantly, confidentiality when using scores and student data. Since my students are under the age of 18, a parent consent form was used (See Appendix G for school district's requirements for the parental consent form).

As stated by Mertler (2014), a primary responsibility of the teacher-researcher is to ensure the action research study is ethical. Participation in any research study must be completely voluntary, so participants must give their consent before use of surveys, interviews, video tapes, etc. Dana and Yendol-Hoppey (2014) stated that different school districts have various policies when it comes to research. In addition, the school district requires thesis and dissertation students to submit an approval letter from the ethics committee and a letter of support from the research advisor. The school district approval letter for the present action research study and parent consent form can be seen in Appendix G.

Results and Analysis

The third step in action research is results and analysis and is where a cyclical approach could become part of the study (Mertler, 2014). By looking at data from the study, researchers may have to go back to step one or two to reevaluate and adjust teaching strategies. For the current study, if students did not understand the intention of PBL increasing their level of critical thinking and self-direction, then changes would have been made. In addition, if previous students taught under a traditional method in AP Human Geography have higher assessment scores than the PBL students, then additional changes will be necessary.

Field notes, observations, and interviews were types of qualitative data obtained. I completed field notes and observations daily by using a spreadsheet, which allowed me to record information such as student behavior, student-questions, and type of activities students worked on. Group and individual interviews were conducted the week after the AP Exam, so students had a fresh perspective on PBL and could speak freely about their

experiences because all major assignments had been finished. Group and individual interviews were conducted during class time to ensure all interviews would be completed before the end of the school year. Additionally, if students were to schedule an interview time before or after school, it would possibly impede their time studying for exams in other classes since interviews were conducted one week away from our school's exam week. Individual interviews with the 30 study participants were like the *Sovereignty* checkpoint days when I could meet with students individually. One by one, I would sit down for an interview with students so I could get their personal feelings about their experience with PBL. Group interviews were conducted in each class period (ranging from 24-27 students each), so they consisted of more students than just the 30 participants in the study. However, only responses from the 30 participants were included in the findings and analysis. Interviews were audio taped, transcribed, coded, and analyzed. For coding, I followed the coding and analysis steps outlined by Mertler (2014), first coding the top 15 scoring students and then the bottom 15 scoring students. For each group, I color-coded similar interview responses into categories. After the color-coding for each set of participants, I compared the two, so I could group similar responses and categories between both the top and bottom students. After the grouping, I reread the responses to ensure the categories and themes I identified were the most prevalent. The next step I took was to see what categories and themes helped answer my research question pertaining to student learning perspectives in PBL. Finally, I compared the categories and themes to my field notes and observations to triangulate anything similar I had noted. Through analysis, four major themes emerged in the students' responses: Adapting to a self-directed learning model, displaying a deeper understanding

of the curriculum, time management, and initiative, choice, ownership, and resilience in the learning process.

Quantitative data was obtained by using assessment scores, surveys, and student activity logs. Descriptive statistics were used to analyze the data and determine the frequency of occurrences. A survey was administered early in the school year to obtain information about the students' prior experience in social studies classes. The data was analyzed and compared to see how many students had mostly experienced traditional classrooms versus student-centered classrooms. I analyzed assessment scores to determine the overall understanding and performance of the students. This helped to determine the students grasp of the information for the AP Exam. Students completed a daily activity logged that tracked their productiveness and growth. Students rated themselves on work ethic, use of time, growth, and set goals for the following day.

Reflection

The fourth step in action research involves reflection and impact of the study. This section contains any problems, realizations, changes, further research potential, and any questions necessary for the future. I kept a data journal during the collection process. The analysis of this data journal was vital in the reflection process since it will help determine the student progress through the PBL process. The reflection process is a key section will determine any overall effectiveness of the study and potential advantages in the classroom (Mertler, 2014).

Conclusion

Current teaching methods are not the best to provide students with the higher-level thinking skills needed to be successful after graduation. The purpose of the present

study was to provide these skills in my AP Human Geography class by implementing the PBL model in two phases. The first phase of the study introduced, but did not immerse, the students to the PBL model since it is most likely a different teaching style than they are accustomed to. The second phase fully implemented the PBL model by having students demonstrate full understanding of each learning objective in the AP Human Geography Curriculum Articulation. By allowing students to be self-directed in this Curriculum Articulation, they moved at their own pace to understand the concepts and ideas required to do well on the summative assessments. Interviews conducted after the study allowed helped determine the students' perspectives on PBL and their own learning.

CHAPTER 4

FINDINGS AND RESULTS

This chapter will focus on the findings and interpretation of data in the present action research study about project-based learning in a social studies classroom. After collection of data, I analyzed the results to determine an answer to the research questions. Field notes, observations, and interviews were types of qualitative data reported. Quantitative data was obtained by using assessment scores, surveys, and student activity logs. Finally, a conclusion will summarize all information from the findings, results, and interpretations.

Problem of Practice Statement

The identified problem of practice for the present action research study involves high school students learning the higher-level thinking skills needed to be successful citizens after high school graduation. The specific problem is that many educators in South Carolina are using teaching methods that do not cultivate higher-level thinking skills; instead, they use teaching techniques that cater to surface information and memorizing facts for success on standardized tests (Mehta, 2013; Vogler & Virtue, 2007). In the last few decades, American education has focused on standards-based, high-stakes testing that has caused teachers to change their teaching practices (Lefkowits & Miller, 2006). These standardized tests have caused teachers to revert to essentialist theory that relies on memorization of basic facts. These facts are only surface knowledge such as the ability to recognize terminology, dates, or specific elements in a curriculum.

Absent from curriculum, especially in the social studies classroom, are higher-level skills on Bloom's taxonomy. The lawmakers who backed the standardized test movement seem to have a different value on the current high-stakes testing and fact-driven curriculum than the public (Lefkowits & Miller, 2006). When my students first enter my classroom, they struggle to go beyond simple memorization. Our first test of the year is always a shock to their system, even when I stress the need to use analysis and creativity in the studying process. I see this struggle each year, and it is evident most students rarely had to utilize high-level thinking in the past.

Silva (2009) stated that higher-level skills in education are characteristics such as creativity, innovation, integrity, self-direction, work ethic, and collaboration experience. Adler (1982), a perennialist, stated that the "enlargement of the understanding" is "a mode of teaching and learning that has all too rarely been attempted in the public schools" (p. 28). However, this "enlargement of the understanding" taught through inquiry and questioning is exactly what produces skills needed to be successful in the contemporary world. Therefore, teachers need to use methods that cultivate this type of thinking to prepare students effectively. Curriculum should be centered on analysis and creation. For example, instead of just memorizing a hypothesis, students should be taught and possess the skills to explain why a specific hypothesis might be wrong and suggest an alternative theory (Anderson & Krathwohl, 2001). Students should have a basic knowledge of events and ideas; Crocco and Costigan (2006) argue that instead of helping public education, high-stakes standardized testing might be destroying it. Teacher accountability for test scores gives teachers no other choice but to teach to the test, and federal mandates have focused on math, English, and science for testing purposes.

Noticeably absent is social studies, commonly thought to be one of the four core subjects. Some U.S. States have added social studies in the testing mix, but those tests are also focused on mainly-content based fact questions. Some social studies teachers have called their high-stakes assessment curriculum a "forced march" where they do not have room for deviation and meaningful student-centered assignments (Crocco & Costigan, 2006). A continuation of this will not allow for teachers to provide the higher-level thinking skills needed to be successful in the 21st century, and "the study of social studies will become nothing more than the ability to regurgitate a collection of facts listed in a state-mandated curriculum framework" (Vogler and Virtue, 2007, p. 57).

Purpose Statement

The purpose of this action research study was to implement project-based learning (PBL) in my Advanced Placement (AP) Human Geography class to improve the students' improve the students' perspective of their own learning. I intended for students to learn how to understand information on a deeper level, not just know basic facts and definitions. I used PBL's inquiry-based learning, which helped students develop "intrinsic motivation and learn to think strategically about core academic concepts" (Lent, 2015, p. 104). De Witte and Rogge (2016) stated that inquiry-based learning has proven to increase achievement, motivation, and overall class atmosphere. Obtaining these skills will allow students to think outside of the box and apply familiar concepts to unfamiliar situations. As stated by Adler (2012), "Skills cannot be acquired in a vacuum" (p. 26), and PBL may allow students to connect ideas across disciplines and become better critical thinkers overall.

Research Question

Historically, traditional teaching methods have not maximized learning for each student. These methods are good for obtaining surface knowledge but fall short on developing critical thinking skills. As an attempt to provide students with higher-level thinking skills and a better understanding of the content and how to use it in the outside of the classroom, I implemented project-based learning in the AP Human Geography classroom.

RQ1: How does project-based learning impact students' perspectives of their own learning in AP Human Geography?

RQ2: After using project-based learning, do summative assessments in class indicate that students are prepared to be successful on the AP Human Geography Exam?

Findings and Interpretation of the Study Results

Action Research Design

Reporting the findings of the present study creates a greater understanding if interpretation and analysis are used in the same section. Students in my 2017-2018 AP Human Geography classes were the participants in the present study focused on the impact of PBL on student self-awareness, perspective, and ownership of their own learning. Students were gradually exposed to the PBL process from the beginning of the year until it was time to start reviewing for the AP Exam administered on May 18, 2018. *Sovereignty* was a yearlong project where the students developed a fabricated country in relation to the key concepts and ideas learned in the AP Human Geography curriculum. Using surrounding countries in their *Sovereignty* country's region, students had to

research real world statistics and country features to develop their own country. No decisions could be made without first researching how the concepts learned in class applied to real countries, because this type of deeper thinking is required to be successful on the AP Exam.

The present exploratory mixed methods action research uses both qualitative and quantitative data to help answer the research questions (Mertler, 2014). Qualitative data in the form of interviews and observations were used to analyze the student's perspectives and ownership of their own learning. Quantitative data in the form of summative assessment scores, surveys, and student activity logs were also used. The selection of the participants was based on the teacher-created class final exam that serves as practice for the AP Exam. The class final exam also counts for 20% of the students' overall grade in AP Human Geography. The top 15 and bottom 15 scorers on the class exam are the participants in the study. This sample selection was intentional, so I could determine if the most successful students had a different perspective and understanding of PBL when compared to the students who were less successful. Students were assigned pseudonyms and the two lists of students are as follows:

Top 15

Bud, Dawn, Don, Drew, Gillian, Jacky, Julia, Sonja, Laura, Lillian, Liz, Luigi, Phil, Rose, Tom

Bottom 15

Benji, Callie, Grace, Hannah, Ian, Jim, Matt, Monica, Paul, Randall, Ronda, Rosie, Violet, Wendell, Winter

Qualitative Data Collection Results

Through data collection and analysis, four themes emerged to describe the students' perspectives and awareness of their own learning in the PBL process.

1. Adapting to a self-directed learning model
2. Displaying a deeper understanding of the curriculum
3. Time management
4. Initiative, choice, ownership, and resilience in the learning process.

Each of the themes are reported and discussed below. Direct quotes from the participants are unaltered so their thoughts are shown in the most accurate way possible.

Adapting to a self-directed learning model. From the beginning of the school year, students were encouraged to be self-directed learners which is a vital piece in the PBL process (Kokotssaki, Menzies, & Wiggins 2016; Larmer & Mergendoller, 2010). Assignments for each unit were presented in calendar format, and students worked through them at their own pace. *Sovereignty* was included in the assignments, and students were expected to complete the various aspects of the project as they worked through the units. When data collection for the present study began in March, students were already accustomed to the process. However, the students needed time to adapt to being self-directed, because survey results showed that over 53% of them were never required to use anything more than simple memorization to be successful in a social studies class. Group and individual interviews showed that students certainly struggled in adapting to PBL, but many of them thrived once they learned how they worked best. Students from both subgroups (top 15 and bottom 15) struggled, but all the participants had positive perspectives when it came to their transformations as learners. Each of them

said they became better self-directed learners throughout the class and that will carry over to other classes they take in the future. For example, when asked if they have become more self-directed learners after completing the PBL unit, participants from the top 15 responded with the following:

> Bud (Top 15): *I used to rely on my teachers to stand in front of the class so that I could learn the information needed for the class, but now I know that I can learn it on my own…*
>
> Julia (Top 15): *In middle school, we had done self-directed learning, but it was much more of teach yourself everything and less of direct yourself. This class taught me how to direct my learning so that I can be the most successful. I learned more of how I learn best and it also taught me how to study without a study guide.*
>
> Rose (Top 15): *This class forces you to do work if you want to be successful. In previous classes, self-directed learning was not necessary, but if you wanted to do the best you could, you had to do it. In this class, if you don't take charge of your own learning, you're in trouble... I wanted to do well, and the only way to do that was to actually do my work.*
>
> Dawn (Top 15): *I learned that this is a class where you can´t just sit back and only memorize stuff. You actually have to put in, like, effort and time. Knowing*

how to do that and getting self-discipline has made me a better self-directed learner.

These four students have the same theme, but very different ways of addressing it. Bud states that he was accustomed to being successful in a teacher-centered classroom because the teacher provided students with the information necessary to get good grades. There was not much studying needed because the teacher was the one dispensing the important information. Julia was different because she had experienced self-directed learning, but it did not seem very effective. She made a very important distinction between teaching herself and directing her own learning. That is an important metacognitive skill I have not seen from many students in my career. Julia understood her learning so well that her ability to study without a study guide is an achievement I did not expect from the PBL process. Rose seemed to give herself an ultimatum with the self-directed process. She states that her previous classes did not require self-direction to be successful, but she saw it as a necessity for success in this class. The last line where she states "actually do your work" implies that she could have given less effort in previous classes but still been successful. Although Rose sees this as somewhat of forced learning, I interpret it as a positive because she had to apply herself instead of sitting back and giving minimal effort. Dawn had a similar reaction because she realized she could not just "sit back and only memorize stuff." Her statement implies that she never had to put forth effort before but was still successful.

The students in the bottom 15 also stated they understood how to become self-directed learners. Their ability to reflect on their own learning was very impressive,

because I was worried they would be discouraged by their lower grades on the class final exam. Here, Monica shows that it took trial and error to understand her own learning:

> Monica (Bottom 15): *I have been given opportunities throughout the year to take responsibility for my own education…I have experimented with learning strategies and have been able to discover which self-directed learning style best works for me.*

This type of thinking is great because Monica realized lower grades on assessments and the project would force her to change how she was learning and studying. Many times in my career, students who do not perform as well as they would have liked often blame the teacher. However, Monica took responsibility for her own learning. Another student from the bottom 15 understood the journey in self-direction, but not quite as thoroughly as Monica.

> Randall (Bottom 15): *I have learned to work individually on projects without instruction of the teacher, but rather following instructions. I liked the projects in this class because I could work at my own pace and be creative while still following the guidelines.*

The perception from Randall is the students had to complete things on their own, although I stepped in multiple times to direct them to one way or another. His ideas imply that he enjoyed the choice aspect of *Sovereignty* because he was thinking of following instructions as his own doing. I am sure most of his other classes required him to follow instructions as well, but he finally realized the importance of following requirements. During my observations, I would notice Randall being off task occasionally, so it was interesting that he liked pacing himself on *Sovereignty*. On checkpoints and the final

product, he was still missing a few required elements in his project, but in his mind, he still followed instructions.

Jim (bottom 15) had similar revelations as Bud (top 15) in that the students could not sit back and rely on the teacher to provide all information necessary.

> Jim (Bottom 15): *I was forced to stay on top of my work and learn everything on my own, without my teacher spoon feeding me information.*

The word "forced" seems harsh like Rose from above, but it still shows that Jim understood the urgency to structure and direct his own learning. He could not rely on the teacher to catch him up, but instead knew the pressure was internal if he wanted to be successful.

Displaying a deeper understanding of the curriculum. My problem of practice stated that traditional classrooms do not cultivate the higher-level thinking skills needed for students to be successful in the modern world. Basic memorization was not enough, and participants in the present study described how they have a much deeper understanding of the curriculum having been through the PBL process. Participants from the top 15 and bottom 15 both had positive thoughts and comments when it came to truly knowing and owning the information from AP Human Geography. When asked if *Sovereignty* and the structure of PBL helped with their own knowledge, this is what one of the bottom 15 students said:

> Callie (Bottom 15): *After going through the textbook, watching the videos, and having Sovereignty, I realized how much I actually understand the information and can apply it to other things outside of the classroom.*

Callie had one of the lowest scores on the class final exam, but she still felt that not only did she have a better understanding of the content, but she also felt good about connecting ideas to other subjects outside of the classroom. Being able to connect familiar ideas to unfamiliar situations is great evidence of critical thinking. Having the students use real countries to serve as a base for their fabricated country made them apply their knowledge instead of just memorizing it.

Matt, another one of the bottom 15 students, saw his studying and acquisition of knowledge and skills increase dramatically with the PBL structure.

> Matt (Bottom 15): *I feel like I am much better at studying and improvising. As someone who never actually did study prior to AP Human Geography and rather tried to find shortcuts to do well, the project and class definitely makes you realize that you need to study. One thing that did make this easier was the idea that it wasn't just writing down definitions, but rather understanding ideas and linking these ideas together. This helps in all classes as it helps you to keep focus on the big picture rather than focusing on tiny details and trying to memorize them.*

Matt's realization that he had to study is a bright spot for any teacher. He was one of the students who never had to study much through middle school because he was smart enough to simply memorize necessary information. Matt was a frustrating student in the beginning of the year and would often ask procedural questions that I just covered. In my field notes and observations, I noted four times that he asked something that was previously covered or could have easily been researched. However, these questions reduced when we got closer to the exam because he became much more efficient in his

own learning. The most salient part of his answer was his idea of focusing on the bigger picture, because that was not something he was able to do earlier in the school year.

The idea of looking at the bigger picture was not lost on the top 15 students. Liz stated that she could easily carry her knowledge outside of the classroom thanks to completing *Sovereignty*, which forced students to make real world connections.

> Liz: I *can also connect what I do in other classes to the real world and to this class. I now have an understanding that allows me to share what I have learned with other people.*

Liz's statements align with Al-Balushi and Al-Aamri (2014), because she takes what she has learned out into the real world. As a follow-up question, I asked Liz who she meant by "other people," and she said it was anyone she talked to. There was a lot of interaction with her parents, which is always something I love as a teacher. When students take ideas home to discuss with their parents, it shows not only do they have an understanding, but also a legitimate interest in what they are learning.

Tom (top 15) and Callie (bottom 15) had similar ideas to Liz in that they saw the benefit of thinking beyond basic memorization. I mentioned Callie above in relation to critical thinking, but she expands the idea in this quote. Since they were in opposite subgroups, it is interesting they came to the same conclusion PBL's benefits. Tom is a student who would not turn in work sometimes, but his interview made me realize that he might have turned a corner. The self-directed character of PBL allowed for him to feel less overwhelmed and allowed him to manage his work. Callie works very hard, but struggled on assessments sometimes. When I asked about strengths students had after completing the PBL curriculum, here is what they said:

Tom (Top 15): …*you can't just memorize information. You have to be able to take the information given to you and then apply it and understand it fully to do anything in this class. The work in this class was a lot, but not way too much. It was a sweet spot for the amount of work. Because when I know I have like 8 papers to do, I just don't do it. But because it was more self-guided, I chose when to do my work and I felt good when I completed it.*

Callie (Bottom 15): *I think the most important thing that I learned was that you can apply this information to other topics and subjects, and it allows you to see from every perspective.*

Tom saw traditional school work as a chore, but when he could move at his own pace there was more ownership to his learning. Notice he said, "I chose when to do my work," which makes me think he did not like being told when to complete assignments. Tom is also one of the students who said he sometimes felt overwhelmed when looking at a large assignment, because it seemed like there was so much to do. This idea will be discussed later in the time management section. The most important aspect of Callie's quote is she mentions being able to see from every perspective. This is important for students to learn, so their information and talents are not isolated to one instance or example.

One of the ideas I tried to get my students to understand was the importance of critical thinking in PBL and other student-centered curriculum models. Monica's comments in her interview showed me she understood this aspect of learning, because she used a phrase I often told my students.

Monica (Bottom 15): *I have developed the strength of being able to apply familiar knowledge to unfamiliar situations.*

One of my goals was for the students to understand information is not acquired in a vacuum. Instead, they need to take information and see how it applies to other ideas. Monica's statement is something I said multiple times in class, so it is good that the idea stuck with her. Although Monica scored in the bottom 15, she would often mention very complex connections in her *Sovereignty* project. Our discussions during checkpoints were very in-depth and she displayed the ownership of knowledge I was hoping for. Her lower scores on assessments makes me wonder if there is test anxiety or another variable that contributes to her lower-than-expected test grades. Monica's situation is why PBL is so important. In traditional classrooms and school, written assessments are often the only way success is measured. Monica's talent may have been missed in a traditional classroom, but after her interview and outstanding project, I see she is a very good critical thinker.

Not all students thrived and understood the importance of thinking deeper with the content. When asked about strengths following the study, Wendell provided an answer I would have expected from him before the project.

Wendell (Bottom 15): *My strengths are memorization and prioritization of important tasks.*

Teacher: *Did you try to go beyond memorization?*

Wendell (Bottom 15): *Yes, but I just wasn't great at it.*

He understood that prioritization is important, but the study was intended for students to go beyond memorization. Wendell is a very intelligent student who tries to complete the minimum required, and this is frustrating as a teacher. Although he claims to have attempted to go beyond memorization, my observations conclude he did not put in too much effort. On multiple occasions, I had to redirect his learning because he was off task. Often, I would ask him to expand on his answers, but he would say that is just what he thought and could not back up the claim with evidence. He is very capable, but seems to be content with being able to memorize information.

Some of the students went beyond my expectations with their interview answers. The goal of the study was for students to become self-directed and have a stronger grasp on the information. A few of the students in the top 15 thrived in the PBL environment because they were free to go beyond basic information without having to wait for their classmates. For example, Bud in the top 15 made a statement in his interview that encompassed not only the main ideas of the PBL study, but our entire class.

> Bud (Top 15): *I have learned that many aspects of our society work around models and laws that make human actions more predictable.*

As a teacher, Bud's ability to take everything he has learned in context of human society is inspiring. Not only did he understand the importance of the information he was using, but the PBL curriculum allowed him to predict what humans could and would do. His analysis of real countries in relation to the content of the course made him make connections to what happens in the world. This type of thinking goes beyond what teachers require, and this is cultivated by student-centered learning.

Not every participant in the top 15 saw the same benefit of PBL and *Sovereignty*. Lillian, one of the highest scorers in the top 15, felt that *Sovereignty* diverted her attention from where she would rather study. When I asked Lillian if she felt the project helped prepare her for the exam, this was her response:

> Lillian (Top 15): *I personally did not find that Sovereignty helped to prepare me for the exam. It was just another thing that I had to do and it took away from studying time.*

This type of comment is understandable, yet frustrating as a teacher. The goal of PBL in the present study was to have students apply the concepts they learned in class so their knowledge and critical thinking skills would be even better because they understood real world application. I think Lillian saw the project as "just another thing to do" instead of a way for her to apply her knowledge. I wish she would have voiced this concern with me during the process, because I would like to have talked her through what she was doing and made the project more meaningful for her learning. For future research, I will spend more time explaining the connection of the project and what the students are learning in the class curriculum. Also, I will make students explicitly tell me their connections between the project and curriculum whenever I individually review their work during checkpoint days.

Time management. Research says time management for both teachers and students is vital in the PBL process (Kokotssaki, Menzies, & Wiggins, 2016; Larmer & Mergendoller, 2010; Mergendoller & Thomas, 2005). A surprising revelation from the interviews was how the students viewed their own time management and procrastination. I expected many students to comment on critical thinking and taking their knowledge

beyond surface level facts when I asked for them to elaborate on weaknesses they still had after completing PBL. To my surprise, time management and procrastination was the main weakness for 70% of the participants. There was not a trend toward more of the top 15 or bottom 15 students. There was almost an equal split between the two, with 67% of the top 15 noting time management as a problem and 73% of the bottom 15 noting the same. Looking at the participants' statements helps shed light on possible causes and solutions. First, comments from some of the top 15 students include:

> Phil: *Procrastination. I think this is due to the fact that most of the projects we have can be procrastinated on and still make an okay grade.*
>
> Bud: *A weakness that I still have is that I tend to procrastinate but I have improved in this area.*
>
> Drew*: I still tend to procrastinate after being assigned some projects. I would still begin the project a few days before it's due instead of right when I am handed the project.*
>
> Sonja: *My weaknesses include procrastination and dealing with stress. I did not procrastinate in this class as much as others because we always had something to work on, but in other easier classes I tend to slack off because I know I can pull out a good grade with little time and effort. My stress, on the other hand, was directed more towards this class than any other. I still need to learn how to deal with my stress because I feel like it wears me out.*

Rose: *My weaknesses I have after this class are procrastination and self doubt... I would also procrastinate at home because I didn't feel like learning so I would stay up late…I also procrastinated on Sovereignty because we had so much time…. I need to work on that. Finally, I still doubt the quality of my work and if I'll do well on a test even though it's always fine because I always prepare.*

Don: *Procrastination*

Gillian: *After taking this class I find that while I am more likely to get things done ahead of time than I was at the beginning of the year I still procrastinate more than I should.*

Luigi: *I still tend to procrastinate, however, I tend to procrastinate less.*

Dawn: *I still procrastinate sometimes even though I know the consequence.*

Here are comments from some of the bottom 15 students:

Ronda: I *still tend to procrastinate, though not as badly. I also wait till it is too late to study for things.*

Teacher: *Why do you think you procrastinate if you know there is a lot of work?*

Ronda: *When I procrastinate the work then piles up and it seems like there is even more than there really is.*

Callie: *I am still struggling with time management, which can be tough when we have projects like sovereignty and quizzes that we take at our own pace. However, even though I struggle with this, I have definitely improved this throughout the year, and did not let it become the best of me.*

Benji: *Procrastination!*

Wendell: *My weakness is procrastination and laziness and avoidance of work.*
Teacher: *If you know you avoid work, why do you do it?*
Wendell: *I think this is cause and effect because I procrastinate and then the work piles up.*

Grace: *Waiting until the last minute to get work done.*

Jim: *My weakness would probably be that I wait to do stuff at the last minute.*

Winter: *I feel like I still have a problem with procrastination after this class, but I have acknowledged it and am working on fixing it.*

Violet: *I will procrastinate every once in a while and that sometimes I don't have the technology to do work for this class.*

Students from both the top 15 and bottom 15 had similar comments when it comes to procrastination. Some, like Bud and Ronda, stated they know their procrastination has gotten better. Since this procrastination weakness was so prevalent, I wanted to try and pinpoint some causes. Some of the students, like Wendell and Ronda, had interesting answers to my follow-up question. The procrastination creates a backlog of work and that makes the procrastination even worse. Phil from the top 15 had a very interesting take on his procrastination, because he viewed it as okay because he could still make good grades while procrastinating. Phil is a naturally intelligent student who thinks quickly on his feet. In my observation notes, I stated that Phil works well under pressure, because he completed work very quickly even if he waited until the last minute to do so. Although he had the idea he could still make good grades while procrastinating, some students cannot do that.

Another idea when it comes to causes of procrastination is the unfamiliarity with a student-centered curriculum. This will be discussed further in Chapter 5, but with so many students identifying procrastination as a problem, this makes me think their lack of experience having to work on their own could be a major cause. This could also have implications on how assignments are structured. Students should be held accountable with more checkpoints and have something due each week or every two weeks. Since students from the top 15 and bottom 15 both identified procrastination as an issue, that proves it is similar to students in either category. The quantitative data shows that 53% of the students did not think they had a social studies class that required more than simple memorization to be successful. Most of those students were involved in a traditional, teacher-centered classroom where the students sat, listened, took notes, and answered

basic questions on a test. Since the PBL experience was the first time they had to be self-directed, I understand some of their procrastination. Most of my students are very intelligent and can memorize large amounts of information in a short amount of time. In previous classes, they could memorize information before a test and do quite well. Procrastination was simply part of their studying routine. Many of them realized procrastination was not an option in PBL, and if they procrastinated they would not be successful or would cause themselves stress. In one of my follow-up questions to why students procrastinate, Tom from the top 15 had a revelation that could help all students.

> Teacher: *So, if students procrastinate, how could teachers help with this problem?*
>
> Tom: *Wait, I think you actually did that with our checkpoints for Sovereignty. I hated when the checkpoints came up because it meant I had to get all that work done. However, when the next checkpoint or final due date came up I realized I had already done a lot of the work. Maybe in the future there could be even more checkpoints because that would reduce our procrastination.*

This is an important thought by Tom, because he is correct that more checkpoints would reduce procrastination overall. However, the goal of the study was to make the students more self-directed learners. Perhaps a future study could implement checkpoints that are decreased over time to see if students learned to eliminate procrastination. Another option would require the students to create their own checkpoints or timeline. An activity like this would give them a sense of the work and thought it takes into completing a project.

Another aspect of procrastination and time management that stood out was how it led to stress for some of the students. This was seen more in the top 15 students, who put more internal pressure on themselves to make good grades. Sonja from the top 15 said

procrastination and stress were a problem for her, but she procrastinated less in AP Human Geography than other classes. However, most of her stress came from AP Human Geography. Looking later in the interview, Sonja's stress was more geared toward expectations than procrastination. Talking about her least favorite part of PBL, she stated the following:

> Sonja: *My least favorite part of the class was the constant pressure I put on myself to get good grades. A lot of my friends and other classmates put me on a platform as a "smart" person and I feel like I am always trying to meet their expectations. In this class, I felt like the pressure I put on myself was even worse than normal.*

There are many reasons students feel pressure to perform well, and Sonja's pressure seems to be both internal and from peer expectations. Being self-directed may have caused her more stress because she felt the need to be ahead of everyone else. Sonja's comments and my observation notes lead me to believe she did not procrastinate at all. Instead, she always felt she could be doing more which led her to believe she was procrastinating. This type of thinking is concerning, because Sonja is an extremely intelligent and talented student. She is involved in multiple extracurricular activities and will be ultimately successful in whatever career she chooses. Perhaps another study could discuss the need for student stress and time management.

Initiative, choice, ownership, and resilience in the learning process. PBL requires students show initiative, allows choice, and cultivates ownership and resilience in their own learning (Kokotssaki, Menzies, & Wiggins, 2016; Larmer & Mergendoller, 2010). My students developed their reflection skills throughout the study, and many of

them noticed a change during our interviews. Jacky, one of the highest scoring students in the top 15, understood this initiative and choice quite well. Her PBL perspective was positive, and she enjoyed having freedom to command her own learning.

> Jacky (Top 15): *Because we learn a lot of the material outside of school, we are responsible for staying on task and turning in assignments on time.*
>
> Teacher: *Did you like having to manage your own time during the learning process?*
>
> Jacky (Top 15)*: Yes! You did not micromanage us, so it really motivated me to work hard and apply myself to my schoolwork.*

The lack of micromanaging was empowering for Jacky, possibly because she had not experienced that in school before. She thrived in the PBL environment and created a complex model of her largest *Sovereignty* city for the project. The detail that went into the city showed me she enjoyed the project, but more importantly, understood the concepts and how to apply them in a practical situation.

Laura is another student in the top 15 who understood the importance of ownership of her learning. She adopted an ownership that I did not intend for students to have.

> Laura (Top 15): *Now I know how to take account for my actions. I understand that my learning experience is up to me and my understanding is based on the amount of work I put in.*

On one hand, I like Laura's comment because she felt as though she took control of her learning. On the other hand, her comment makes me wonder how efficiently she was working. The PBL process should not take significantly more time than a traditional

learning process, and I do not want a student to think their understanding is measured by the minutes they spent learning the material. A follow up question asking Laura to expand on that idea yielded an answer that helps explain her mindset of needing to spend significant amounts of time to learn.

Laura (Top 15): *I am a perfectionist and focus too much on small details.*

PBL has positives and negatives when it comes to students like Laura. She is very intelligent, but also very meticulous. Since she is a perfectionist, she would put more time in than necessary to be successful. Laura would get ahead of her classmates when it came to quizzes and project checkpoints, but would still have detailed notes and products to show me each time I checked in. Unlike many of her peers, Laura did not mention procrastination as a problem any time in her interview. She has the opposite problem because she would redo and look over work constantly.

Rosie is a student in the bottom 15 who, like Jacky and Laura, enjoyed the necessary initiative and ownership required to be successful in PBL. Rosie is a student who had numerous absences throughout the year, but they became more prevalent during the study. Rosie hinted that she had a couple issues at home and a few of her teachers voiced concerns to Guidance who would regularly check on her. Through the hardships, Rosie still had a positive experience with PBL.

> Rosie: *Reliability on your own self was also something that came out for me since other classes I would usually have friends I could ask notes for but, here I only had myself and I liked that.*

The flexibility of time and pacing helped a student like Rosie. She is also one of my students who learned English as a second language, so being able to work at her own

pace was a major positive in PBL. Here is Rosie reflecting on her perspective of PBL style on other classes:

> Rosie: *More classes should be at the pace of this class because some go way too slow, where some kids go ahead the units but, some also go way too fast as teachers add complex projects and work into fast. I have another self-learning class but, it's extremely strict and too fast. We learn out lessons by doing projects and learning ourselves through them yet, this class had an amazing pace. Everything you need is right in front of you and any work you have is not added in piles. It was really great, honestly.*

For a student with many absences and other things going on in their life, I was proud that Rosie had a positive experience with PBL. She kept up with her work as much as she could and caught up whenever possible. The other class she referenced with self-direction was a science class. Rosie expanded by saying she liked the class, but there was not enough flexibility to meet all the required deadlines. What she liked about my class structure was that students were given everything for their unit (quizzes, assignments, project, etc.) at the beginning. That way the students knew everything required of them and they could work through at their own pace.

Tom, a top 15 student, enjoyed the element of choice available in PBL. When I asked Tom if *Sovereignty* allowed him to take more ownership of his learning, this was his response:

> Tom (Top 15): *Yes, it did. I liked that there were options. Some of the options weren't ones that I chose, but some were. And I feel that choices make it so that I own my learning.*

Luigi, another top 15 student, felt there needed to be more choice when it came to *Sovereignty.* When I asked Luigi about the ownership of his learning, this was his response:

> Luigi (Top 15): *Yes, to some extent, it gave us choices on what we could work on but it didn't give us choices on the topics.*

This is a valuable lesson for me as a teacher because I felt as though students had choice of topics when it came to the project. In future studies, this is something that needs to be made more clear, because Luigi did not feel he had as much choice as I did.

Initiative, ownership, choice, and resilience were not a positive for all participants. Winter, a student in the bottom 15, found the amount of work given to the students was overwhelming at times.

> Winter (Bottom 15): *My least favorite part would probably be the non-stop learning…I feel like it's better for our learning, but not for our stress and anxiety levels as incoming freshman and our first high school experience.*
>
> Teacher: *Did you expect a lighter workload than what you received being this was an AP class?*
>
> Winter (Bottom 15): *I don't know, some people just stress more.*

It is interesting to note that I talked to Winter twice during the study about her work ethic and use of time. She was often off task, checking her phone, or trying to talk to people around her. Her least favorite part was the "non-stop learning," but that was something many other participants thoroughly enjoyed. Winter admitted that was better for her learning, but it hurt stress levels. I enjoyed having Winter in class, but sometimes I questioned her readiness for the rigor of AP. When she tried, her performance was not

bad, but her comments suggest that she did not like PBL because it made her work to obtain knowledge and skills. An implication is that Winter was not ready to take ownership of her learning in the PBL process. She was capable, but maybe other variables were in play of which I was not aware.

Ian, another student in the bottom 15, also struggled with ownership of his learning with PBL. However, Ian's reflections and comments tell a different story than Winter. Ian concluded that ownership of his learning was up to him and his success depended on what work he was willing to put forth. When I asked Ian what his least favorite part of PBL was, here was his response.

> Ian (Bottom 15): *Having to push myself to do better. Other students and I tend to blame the teacher for their grades/success in the class which in this class your the problem if your grade is bad. So I struggled with owning up to this.*

I was very impressed with Ian's level of thinking when it came to his ownership. He freely admitted that he and his peers often blame teachers for their performance, but the PBL process puts the onus on the student. Although not many students revealed this in their interview, I imagine it was a thought that more students than Ian had. Although Ian owned that he was responsible for his learning, he unfortunately did not see the benefit of the study. When I asked if he thought *Sovereignty* helped with preparing for the AP Exam, here was his response.

> Ian (Bottom 15): *Not exactly because it was hard for me to create this imaginary country.*

It was difficult to get any more information from him other than "it was hard." This tells me that modifications for my PBL process need to be made in order to connect more with

students like Ian. He had to work a little harder than some of his classmates to be successful, so there needs to be a way those students get more out of the PBL experience.

Another student in the bottom 15, Paul, had a similar response when asked if *Sovereignty* helped him gain more ownership of his learning. This was Paul's response:

Paul (Bottom 15): *Not really because you could make most of the stuff up.*

Although I understand different student perspectives, I do not think Paul grasped the overall purpose of *Sovereignty.* If he was making up facts and connections, then that would not help him with enriching his knowledge about important concepts in class. PBL required that students take ownership of their own learning, but Paul is an example of how that could go wrong. Instead of putting in the time and effort to develop his country properly, he felt that he could just create whatever he wanted.

Quantitative Data Collection Results

Quantitative data in the form of summative assessments helped me select the participants of the study according to their scores on the class final exam. Other quantitative data in the form of surveys helped capture how students felt about the PBL process and their own learning. The below graphs and tables show quantitative results from student surveys. Each graph and table includes the data for the total 30 participants and the two subgroups (top 15 and bottom 15). The surveys utilized a five rating Likert Scale with a rating of one being "Strongly Disagree" and five being "Strongly Agree."

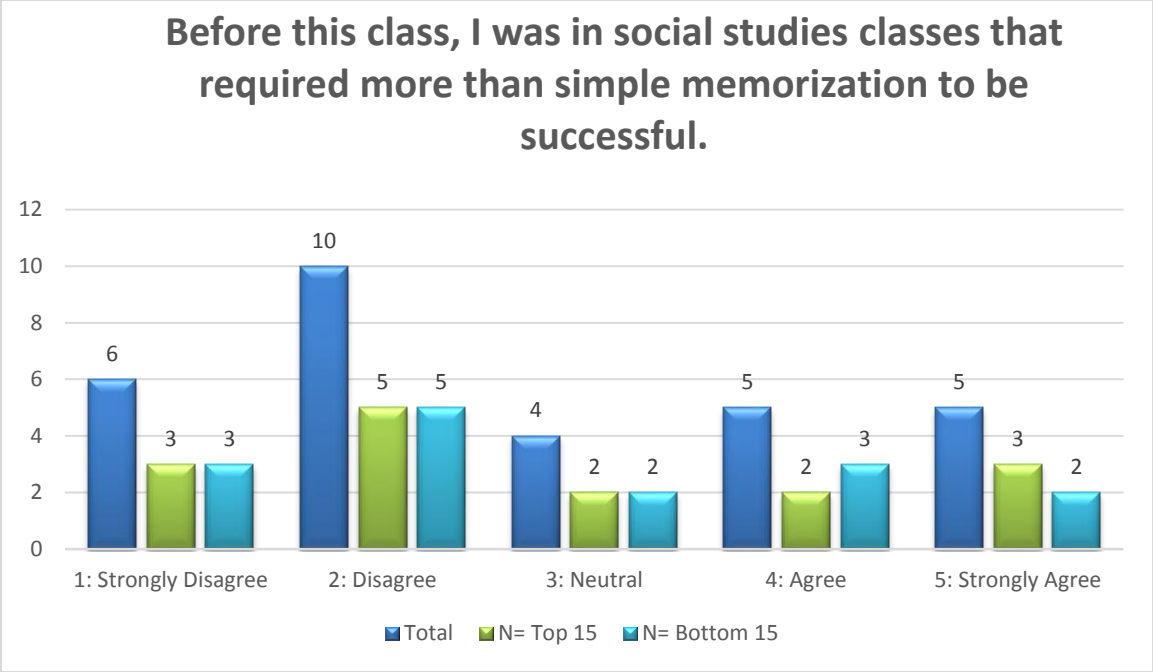

Figure 4.1. Experiences with critical thinking in previous social studies classes.

Table 4.1

Descriptive Statistics for Above Survey Question

n	M	Md	SD
Total 30	2.77	2	1.41
Top 15	2.8	2	1.47
Bottom 15	2.73	2	1.39

The survey results in Figure 1 and Table 1 support my Problem of Practice, because 53% of students responded that previous social studies classes did not require them to use levels of thinking beyond memorization. Four more of the students answered neutral, so that would bring the percentage to 67% if we include those students in a group unsure if they have ever had to use critical thinking skills in social studies. The difference

between the top 15 and bottom 15 students was very small, with only .07 separating the average scores. The mean of 2.77 puts the average response in between the disagree and neutral answers which concludes the average participant did not have to use skills beyond critical thinking in previous classes.

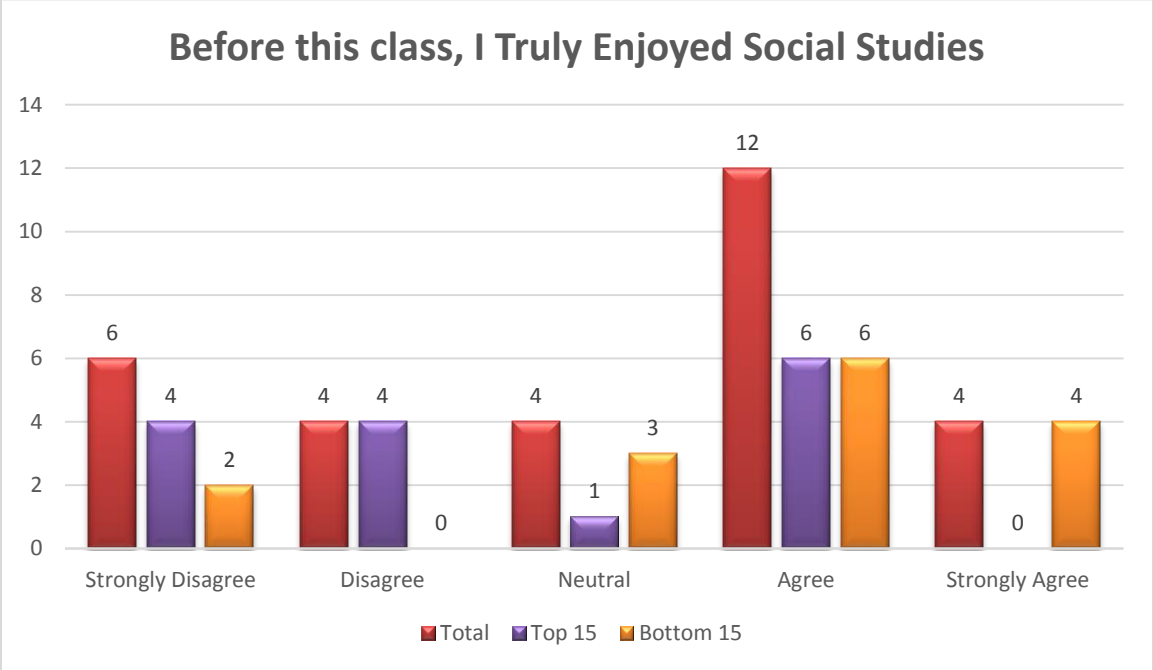

Figure 4.2. Attitude and feeling toward social studies.

Table 4.2

Descriptive Statistics for Above Survey Question

N	M	Md	SD
Total 30	3.13	4	1.38
Top 15	2.6	2	1.30
Bottom 15	3.67	4	1.29

The survey results in Figure 2 and Table 2 show the participants did not have a strong enjoyment of social studies before the study. Overall, 53% of students agreed they had an interest and enjoyment, but the average of 3.13 is right above the neutral answer. However, the median of 4 shows there is a slight tendency toward a larger enjoyment of social studies. Interestingly, the bottom 15 students had more than a full point higher average than the top 15 students. There could be multiple variables that caused this other than just interest. For example, the top 15 students could have been bored in previous classes if there was requirement of rote memorization. These top students may not have been challenged and therefore did not enjoy social studies very much. Another possible variable is the participants did not like their teachers or subject matter in the classes.

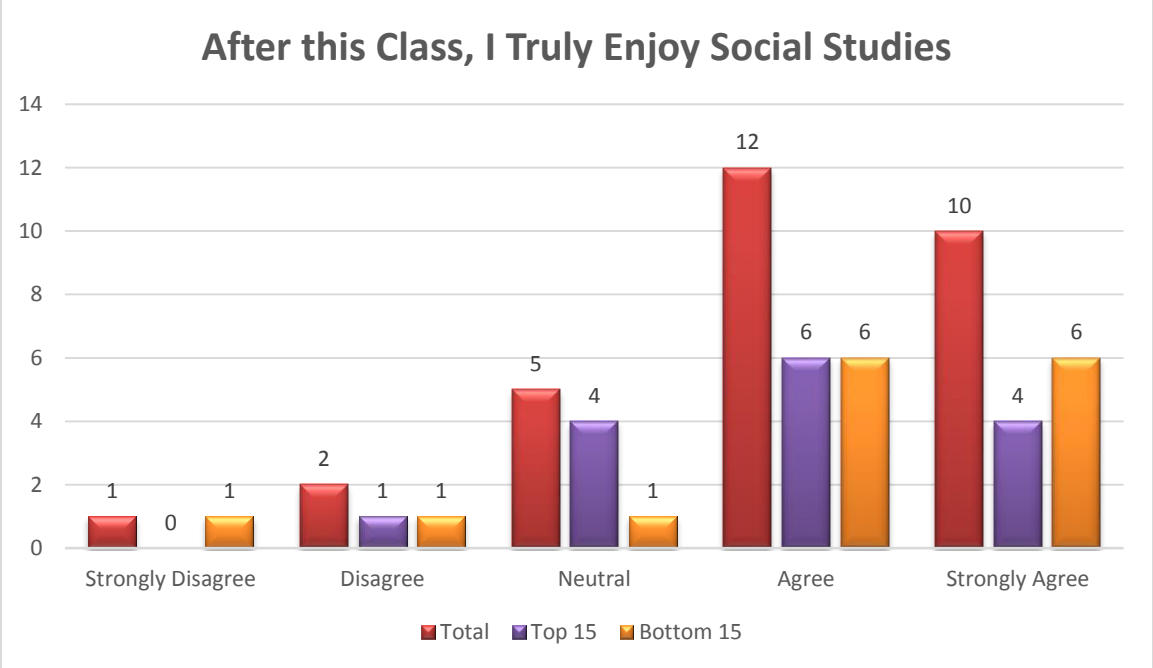

Figure 4.3. Attitude and feeling toward social studies.

Table 4.3

Descriptive Statistics for Above Survey Question

n	M	Md	SD
Total 30	3.93	4	1.05
Top 15	3.87	4	.91
Bottom 15	4	4	1.20

The survey results in Figure 3 and Table 3 show an increase in the enjoyment of social studies after the study. The overall average jumped to 3.93 with the largest increase seen in the top 15 students. Their average increased 1.27, meaning the students averaged a full indicator increase. The median of 4 across the board shows a skew toward the right side of the histogram. The lower standard deviation number also shows more clustering of responses compared to the question pertaining to attitudes before AP Human Geography. Looking at individual responses, only one student rated their enjoyment of social studies lower after the study than before. This student's rating went from 5 to 1, so there is a potential the student read the statement incorrectly. However, there is also a possibility that that student disliked the PBL process so much that the rating did drop from "Strongly Agree" to "Strongly Disagree."

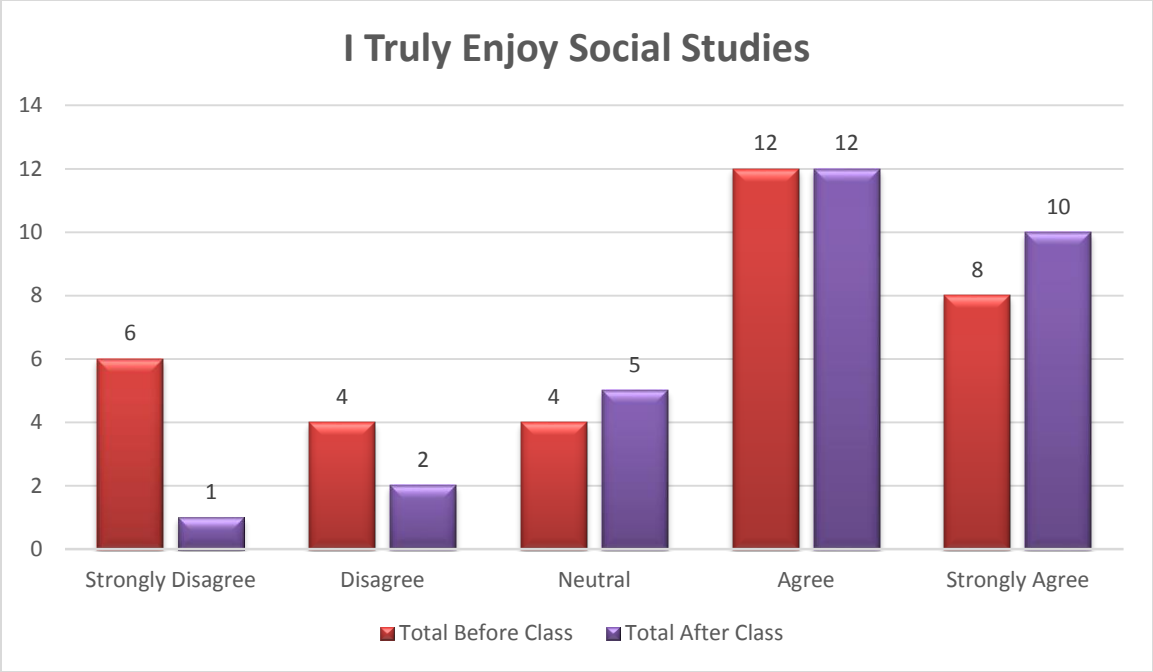

Figure 4.4. Attitude and feeling toward social studies.

Table 4.4

Descriptive Statistics for Above Survey Question

	n	M	Md	SD
Before Class	30	3.13	4	1.38
After Class	30	3.93	4	1.05

The survey results in Figure 4 and Table 4 show an overall comparison of the total student ranking before and after class in relation to their enjoyment of social studies. This histogram and table make it easier to compare the scores side by side. The difference in standard deviation is very evident, having dropped from 1.38 to 1.05.

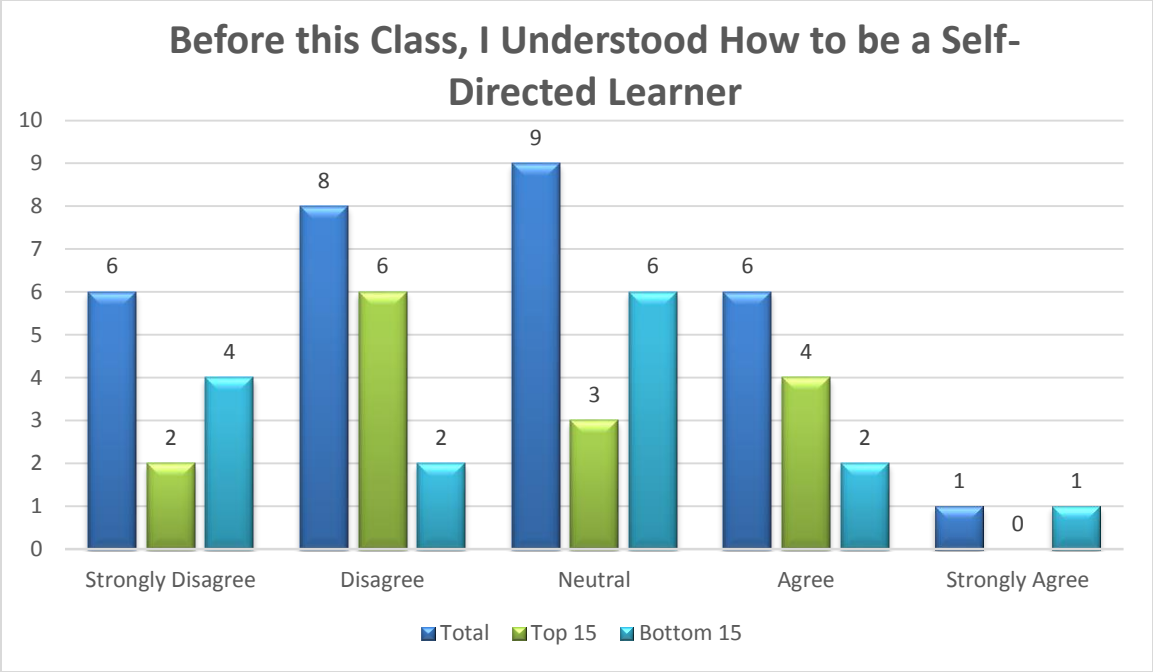

Figure 4.5. *Student perception of their own learning.*

Table 4.5

Descriptive Statistics for Above Survey Question

n	M	Md	SD
Total 30	2.6	3	1.13
Top 15	2.6	2	1.06
Bottom 15	2.6	3	1.24

The survey results in Figure 5 and Table 5 show that most students did not understand how to be self-directed learners before the study. Only 23% of the students chose “agree” or “strongly agree” for this question. Only two students (7%) stated that they strongly agreed to the statement. Interestingly, there was one student represented from each of the subgroups. The average score of 2.6 puts the average participant in this

group between disagree and neutral. There was not a dramatic difference between the top 15 and bottom 15, both averaging the same 2.6 overall. There were two more students in the top 15 who chose agree, so these students went into the study slightly more self-aware when it came to their own learning.

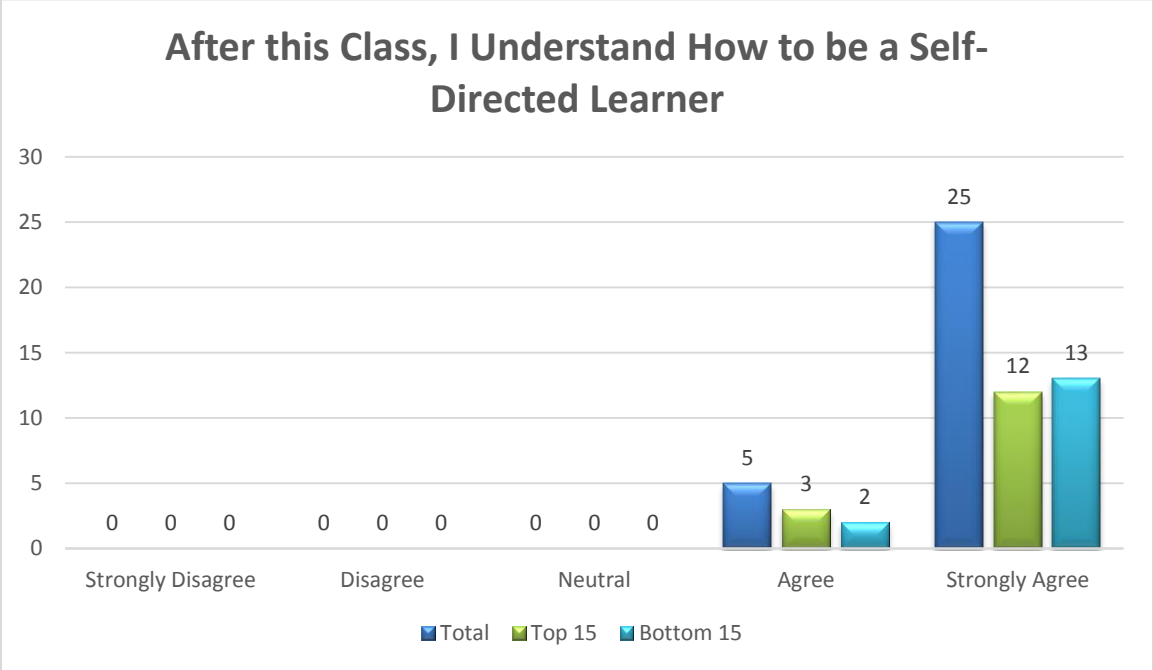

Figure 4.6. Student perception of their own learning.

Table 4.6

Descriptive statistics for above survey question.

N	M	Md	SD
Total 30	4.83	5	.38
Top 15	4.8	5	.41
Bottom 15	4.87	5	.35

The survey results in Figure 6 and Table 6 show a dramatic shift in the participants' understanding of self-directed learning. The total group and both subgroups increased two full levels, averaging slightly under the slightly agree category. The standard deviations decreasing to .41 for the top 15 and .35 for the bottom 15 show that every student made tremendous progress in their metacognition. There is not much difference from the top 15 and bottom 15 scores, with both subgroups having all participants rank themselves in either agree or strongly agree.

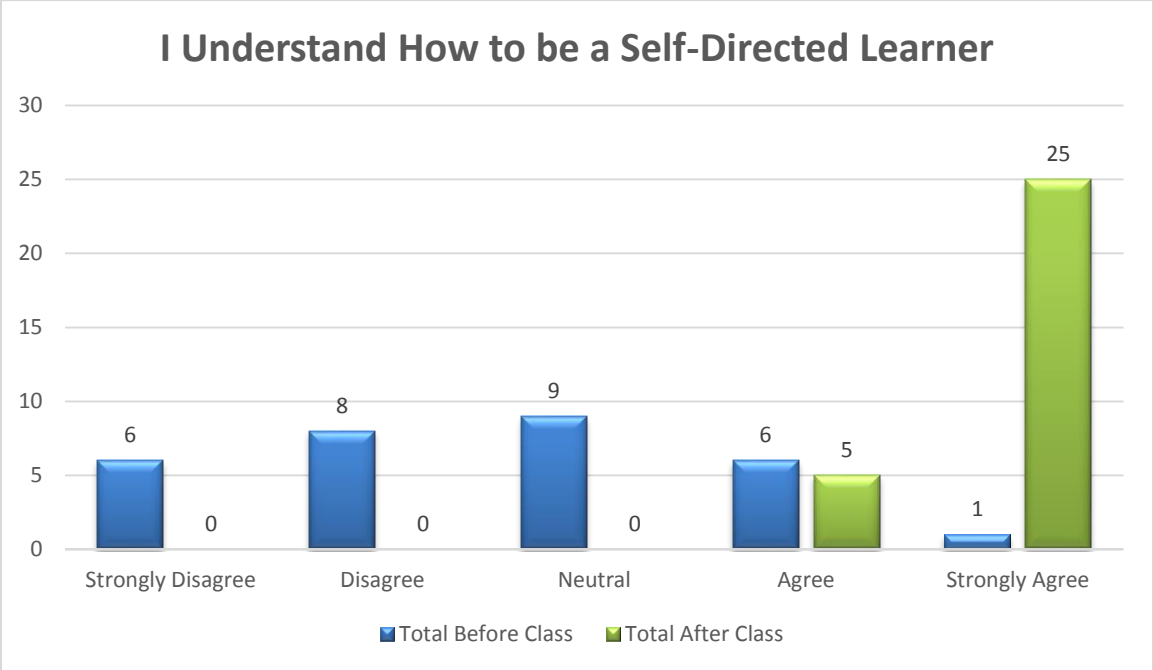

Figure 4.7. Student perception of their own learning.

Table 4.7

Descriptive Statistics for Above Survey Question

	N	M	Md	SD
Before Class	30	2.6	3	1.13
After Class	30	4.83	5	.38

The survey results in Figure 7 and Table 7 show a significant increase for the total number of participants when it came to their understanding of self-directed learning. The overall average increased 2.23 rankings and the standard deviation decreased from 1.13 to .38. The scores trended toward strongly agree after the study and no students scored themselves below agree. For individual students, each person increased their score except for two students who kept the same score as before the study.

Student Achievement Based on Test Scores

Although the present study aimed to obtain student perspective on PBL and the ownership of their own learning, I still had the responsibility of preparing my students to perform well on the AP Exam. I realized that the study was important, but it would have been a disservice to not appropriately prepare the students for the exam. The class final exam I administered that led to the selection of the 30 participants was the same exam given during the 2016-2017 school year. Taking all 107 of the students I taught in AP Human Geography this year, their average score on the exam was one point lower than my classes last year. Although a slightly lower average, there are numerous variables in play for this year's group. The most important variable is the increase in student enrollment. During the 2016-2017 school year, there were 152 freshmen students enrolled in AP Human Geography. Although the school's enrollment was roughly the same for 2017-2018, the number of enrolled freshmen in AP Human Geography rose to 207. The increase of 55 students is a large number considering we normally base recommendations on the top 8-10% of students qualifying to be in the class as freshmen. Parent overrides this year was the main reason for the rise to 207 students. Often AP courses cause a shock to students who are not prepared for the level and rigor of the

work, and the 2017-2018 school year had over 20% of the freshman class at my school enroll in AP Human Geography (McNeil, 2007). As seen from the student interviews, some of those students may not have been mature or prepared enough to be successful coming in to the class. However, the average score on the final exam being only one point lower shows the PBL process still allowed students to obtain the necessary information and skills while taking ownership of their own learning in a student-centered environment.

Conclusion

Chapter 4 revealed and interpreted the data from the present study. Using quantitative data in the form of scores on the teacher-created final exam, the top 15 and bottom 15 students were chosen to be participants in the study. Qualitative data in the form of interviews and observations allowed me to analyze the participants' perspectives on the PBL process. In analyzing the data, four themes were established: Adapting to a self-directed learning model, displaying a deeper understanding of the curriculum, time management, and initiative, choice, ownership, and resilience in the learning process. All four of these themes are key aspects in other studies related to PBL (Kokotssaki, Menzies, & Wiggins, 2016; Larmer & Mergendoller, 2010; Mergendoller & Thomas, 2005). Quantitative data and analysis from student surveys showed an increase how to be a self-directed learner and interest in social studies.

Overall, the participants had a positive experience with PBL. The data shows there were positive and negative experiences for both the top 15 and bottom 15 students. One of the biggest themes to emerge was a struggle with procrastination and time management. Both the student interviews and surveys showed many the participants were

not used to being in a self-directed class and had become accustomed to a traditional teaching model where a teacher was the main source of knowledge. The students in the top 15 adapted quicker than their counterparts in the bottom 15, but both sets of students had a positive perspective on the experience. None of the 30 students reported a decrease in their confidence as self-directed learners from the beginning to the end of the study, and only one student reported the same confidence level.

CHAPTER 5

DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

The last two steps in action research are developing and reflecting (Mertler, 2014). During these stage, the researcher should try to find the answer to the following question: "Based on what I have learned from my study, what should I do now?" (Mertler, p. 211, 2014). In this chapter, an action plan is developed and future inquiry will be discussed.

Problem of Practice Statement

The problem of practice for the present research study is the failure of contemporary American classrooms to cultivate higher-level, inquiry-based, and critical thinking skills. Students are not always learning the skills needed to be successful in the ever-changing globalized world. Schools should no longer structure curriculum around fact-based lessons that expect students to restate information heard in class (Crocco & Costigan, 2006; Vogler & Virtue, 2007).

Purpose Statement

The purpose of this action research study was to implement project-based learning (PBL) in my Advanced Placement (AP) Human Geography class to improve the students' self-awareness, ability, and ownership of learning. I intended for students to learn how to understand information on a deeper level, not just know basic facts and definitions. I used

PBL's inquiry-based learning, which helped students develop "intrinsic motivation and learn to think strategically about core academic concepts" (Lent, 2015, p. 104). De Witte and Rogge (2016) stated that inquiry-based learning has proven to increase achievement, motivation, and overall class atmosphere. Obtaining these skills will allow students to think outside of the box and apply familiar concepts to unfamiliar situations. As stated by Adler (2012), "Skills cannot be acquired in a vacuum" (p. 26), and PBL may allow students to connect ideas across disciplines and become better critical thinkers overall.

Overview of the Study

For students to gain the skills needed to be successful after high school, I implemented the student-centered instructional approach of project-based learning (PBL) in my AP Human Geography classroom. The study aimed to immerse students in PBL to gain their perspective of their own learning in a student-centered environment. Since AP Human Geography students take the AP Exam at the end of the school year, I also wanted to gain insight if students could obtain all the knowledge and skills necessary to be successful on the AP Exam with a student-centered approach. Using an exploratory mixed-methods approach, qualitative data was collected via interviews and observations. Quantitative data was collected via summative assessments, surveys, and student activity logs.

Participants from my AP Human Geography class were selected based on their class final exam scores. The class final exam was administered a week before the AP Exam, because it has the same structure and serves as great preparation. 107 of my student completed the final exam, and I selected the 15 students with the highest scores and 15 students with the lowest scores as participants in the study. For the PBL

curriculum, students developed their own "newly created" country randomly selected by them early in the school year. At the beginning of each unit during the year, students were given a calendar for all required assignments. Using a flipped classroom model, students worked at their own pace to obtain initial information then developed their country according to what we were learning in class. Students had to use real countries as a basis for each decision made, forcing them to learn how the concepts applied to real situations. For the study, students selected a product of their choice to serve as review for their class final exam and AP Exam. Students could choose from a list of suggested products or a teacher-approved product of their own.

Results and analysis determined that students liked the PBL experience and became better self-directed learners. Students from the top 15 and bottom 15 had mostly positive responses in their interviews and all reported growth via their surveys. One of the most common weaknesses the students reported was the tendency to procrastinate. During analysis, I think much of this was caused by a lack of experience in the student-centered classroom. Students reported success in previous classes that required they listen to the teacher and memorize information for the test. PBL required the students become self-directed and truly own their own learning, so they were not going to be successful unless they were willing to work. Once students are exposed to more student-centered environments, procrastination might not be much of a problem anymore.

There were several key questions that surfaced during the analysis and interpretation steps of the present study. Thinking about these questions helps to develop the action plan and suggestions for future research that will follow. Key questions that resulted from the study are:

1. How can PBL be implemented in other social studies classes at my school if students are accustomed to the traditional teaching model?
2. Why did most students struggle with procrastination, even after knowing their grades would suffer due to the lack of effective time management?
3. What project changes can help alleviate stress for the students in the future?
4. How can we help increase student creativity in PBL and other student-centered instructional models?
5. Can evidence of increased student confidence in self-directed learning help teachers from other subjects at my school adopt a student-centered classroom model?

Action Plan

This year my school district partnered with an outside educational consulting firm to help implement 21st century teaching in a few selected schools. The school district-funded consultants have regularly visited and met with a team of teachers and administrators from my school to help us in the process of implementing student-centered strategies that will allow our students to be ready for the world when they graduate from high school. I consulted with the other members of our 21st Century Learning team to help design our action plan following the results and analysis of my study. I shared the results and analysis with my team, along with my recommended actions. Because our team consists of teachers from various subject areas, PBL is not the only student-centered instructional method being used at my school. However, the principles behind student-

centered learning can easily translate to any model a teacher chooses. Using the results and implications from my study, here is the action chart.

Table 5.1

Action Plan Chart

Recommended Action	Who is Responsible?	Timeline	Data Sources	Resources Necessary
Schoolwide professional development plan	Administration 21st Century Learning Team	1 year	Data that backs up the use of student-centered philosophies	Sample lesson plans to implement student-centered learning approaches
Create purposeful Professional Learning Communities (PLC) structured around the development of student-centered learning schoolwide	21st Century Learning Team	Ongoing	PLC-dependent document sharing system: Google Drive	Gather and organize existing resources currently available to our school for each subject area Guidelines and norms for conducting meetings
Ready access to technology for every student, every day	Administration	Summer	Chromebook carts	Chromebook carts and available training
Social studies specific training on PBL	Social studies administrators Teacher-researcher	1 Semester	The present study and other studies that support PBL	Chromebook carts and sample lessons for each social studies subject
Stress and time management lessons for all students	Administration 21st Century Learning Team Guidance department	1 Semester	Data that supports strategies of time management and stress relief	Training and suggested strategies
Social justice and increasing the number of	Middle and high school task force	1 Year	Percentages of traditionally	Support programs Intervention classes

traditionally marginalized students in upper level classes.			marginalized students in upper level classes.	Programs from organizations like the CollegeBoard's "All In" program
Community outreach about the benefit of student-centered learning	Administration 21st Century Learning Team	1 Year	Data that supports student-centered learning	School events that are conducive to model classrooms community members can visit.

The first action step is already developing because our 21st Century Learning team began conducting professional development sessions last year, and we will continue the same practice this year. The team, including administration, agreed that the present study's results warranted further inquiry and implementation of student-centered learning throughout our school. Professional development is vital to properly implement any curriculum change, but often sessions are ineffective and can cause more harm than good (Uslu, 2017). From what we learned in last year's professional development sessions, our staff desired to see more positive evidence for a student-centered approach, so using the sources and results from the present study will help provide those resources. There still seems to be doubt among the staff as far as a need for student-centered approaches, so presenting data from sources such as the OECD (2016a), PISA test can help with the global context. Traditional, essentialist approaches to teaching are doing a disservice for our students in the 21st century, but there are still doubters in my school (Roberson & Woody, 2012). Using student-centered approaches such as PBL is still new for many members of our faculty, so the professional development needs to be implemented slowly. There is a chance some teachers may be overwhelmed with information, and that could turn them away from any potential changes.

Our administration has discussed changing our professional learning community (PLC) structure for a few years. Currently, there is not much accountability or formality to our teams. Being a large school, we have numerous teachers who only teach one subject, but possibly different levels, such as college prep, honors, or AP. We label teams of common-subject teachers as "curriculum teams," but there has not been much change as far as meeting structures are concerned during the last five years. Our students have been traditionally successful compared to other high school in our state, so many of our staff does not see a need to change. The administration wants to structure PLCs with more intentional goals in mind, concentrating on student learning. PLCs will document their progress and attempts pertaining to implementation of student-centered learning using shared documents on Google Drive. Since current meetings can easily get off track with other issues, there will be specific guidelines for PLC meetings to ensure student-centered learning is at the forefront of discussion. A shift toward true learning communities will need to happen. Buchanan (2012) suggests that for teachers to truly learn how student-centered learning is supposed to work in the classroom, they will need to experience it themselves. PLC meetings could be structured like a student-centered classroom where the teachers are learning instead of sitting and listening.

Although technology is not a necessity for an effective student-centered classroom, it certainly helps with implementation. Many members of our staff claim that a lack of technology is holding them back from implementing a student-centered teaching model. That is difficult to dispute, because our school is not a one-to-one technology institution. We have carts of Chromebooks that some teachers share, but only after they have taken a certain amount of certification classes to use them. Our administration and

21st Century Learning team have been thinking of ways we can obtain more Chromebooks so teachers can have the benefit of ready technology. Many of the examples we have used in professional development sessions are centered around technology use, so it is difficult to support teachers with students who do not have access. Our school district has indicated there are possible funds to purchase more Chromebooks, so we are waiting to hear a definitive answer.

The next action step includes specific lessons for my social studies department in relation to PBL. Once the social studies teachers become more comfortable with the student-centered model, they can champion the idea among other subject areas. To effectively implement PBL across the department, I want to develop numerous ready-made PBL units that teachers can manipulate for their own use. Many teachers inside and outside of social studies have good intentions of implementing student-centered learning, but there is a lot of work on the front end of a lesson for it to be effective for students. Using the present study as a base, teachers can implement small aspects of PBL however they would like in their classrooms. Social studies teachers at my school are worried about students not being ready for the high-stakes testing associated with many of our U.S. History and AP courses (Vogler & Virtue, 2007). The teachers see no other way to teach facts other than direct instruction, especially since the high-stakes tests are often focused on specific details. There will always be a need for some direct instruction, but there are ways to implement student-centered learning while blending in direct instruction. For the present study, I implemented a modified flipped classroom so students could work on their *Sovereignty* project as much as possible in class so I was close by as a resource. Snyder, Paska, and Besozzi (2014) demonstrate the benefits of

using screencasts and flipped classrooms in social studies and it would be easy to implement if the previous action step of acquiring Chromebook access for all teachers can be accomplished.

Before the present study, I would not have predicted the next action step. With student-centered learning being new to many students, there needs to be instruction to help them with time and stress management. Many of my top 15 students referenced their level of stress in completing their projects that it creates a concern for me. Also, students from both the top 15 and bottom 15 mentioned procrastination as a problem. Some students mentioned the many steps of *Sovereignty* were overwhelming at first, and it paralyzed their thoughts into not acting at all instead of completing the project one step at a time from the beginning. Our school's guidance department said they had resources in and out of our school that would be helpful with this action step.

One of the most important action steps we can take is opening the door to upper level classes for traditionally marginalized students. I mentioned in earlier chapters that I hope a student-centered curriculum will help close the opportunity gap and create more diversity within upper level courses. The demographics of my 107 total students this school year only had 5% minority students enrolled. Our middle and high school task force will assist in helping all faculty and staff cultivate a new attitude toward inclusiveness in upper level classes. We will continue to meet with parents and students, using the present study to show the benefits of a student-centered, self-directed approach. It is vital to ensure the professional development in earlier action steps includes ways to increase the number of traditionally marginalized students. If we empower students to create more ownership in their learning, it hopefully will not matter what background or

socioeconomic status the student comes from. Programs like the CollegeBoard's "All In" program already has numerous resources we can use to help these traditionally marginalized students.

The final action step is best completed after the others have been put into motion. There are still community members who doubt student-centered learning is the best method of instruction for our students. To show community members the benefits of student-centered learning, we set up model classrooms during our Spring Open House. We assigned student ambassadors to three rooms, one room each for math, English, and social studies. Community members visited the classrooms and the ambassadors gave them a personal explanation of how the classroom worked, how they developed ownership over their own learning, and the benefits they have experienced. After our school implements the professional development, PLCs, and other action steps, we hope to make these model classroom visits a regular occurrence for all community members.

Suggestions for Future Research

Mertler (2014) states the final step in the action research process is reflection. Using the results from the present study, it is important to understand implications and possible future research. Although the same sample size of the present study does not create a statistically significant outcome for all learners, the results are encouraging. Each student-centered classroom is a little different, but the principles are the same.

Since the sample of 30 students in my AP Human Geography class is very isolated, one future research opportunity would be implanting PBL across a larger group within the social studies department. Since the PBL model I used could work in other social studies classes, teachers could modify it to fit their needs. Another potential

research opportunity would be including all my students in a study to see if the trends from the present study are still consistent. Choosing the top 15 and bottom 15 scores from the class final exam helped to make the data more relevant, so my hopes are the results would stay consistent.

Another interesting possibility for future research would be following my 30 participants in a longitudinal study during their high school career. All the participants identified themselves as better understanding of how to be a self-directed learner, and it would be worth researching to see if that translates to other classes. In my interviews, I asked students what they learned from PBL that they might carry to other classes. Many of the responses centered around time management and connecting ideas within the curriculum. Most of my students will enroll in either AP European History or AP World History next year. Those classes are more fact-based than AP Human Geography, but the skills my students learned by using PBL can easily translate. My hope would be they take their newly acquired skills and adapt them to not only the next social studies course, but any course they take.

The present study focused on AP students, but perspectives of students in different levels of classes is worth researching. As mentioned in previous chapters, Grant (2011) analyzed perspectives of students in relation to PBL, but that was not action research. Action research is unique because the teacher doubles as the researcher. Teachers interact with their students daily and understand nuances and reasons students act certain ways. More action research on student perspectives in various levels of social studies using PBL would be effective to see how impactful it would be on a larger scale.

Implementation in courses without high-stakes tests would be ideal so that teachers can freely experiment with different methods within PBL.

Conclusion

The present action research study examined students' perspectives on the project-based learning (PBL) instructional model in AP Human Geography. Traditional teaching models do not cultivate the skills students need to be successful after high school, so I aimed to implement a student-centered approach that helped develop skills like collaboration, critical thinking, and application of knowledge. Following the action research model presented by Mertler (2014), I allowed students choice in their learning while also ensuring they would gain the necessary knowledge to be successful on the AP Human Geography Exam. This is a balance that any course with a high-stakes test must consider when implementing student-centered models. Many of the standardized tests in the era of accountability focused on basic facts that can be obtained with memorization, but 21st century students need deeper knowledge to be successful in the world.

During the 2017-2018 school year, my AP Human Geography students were gradually exposed to PBL from the beginning of the year, so they would be familiar with it for the study's main PBL lesson. Beginning in March, my students worked on a PBL unit that required they review and apply main concepts from each AP Human Geography unit of study as preparation for the AP Exam. Using an exploratory mixed methods approach, participants were chosen based on scores from the teacher-created class final exam. The 15 students scoring the highest and 15 students scoring the lowest on the exam were selected for the study. This allowed me to see different perspectives from students who were the most and least successful based on exam results. Qualitative data was

collected from interviews, field notes, and observations. Quantitative data was collected from summative assessments, surveys, and study activity logs. Evaluation of the data resulted in the students having a positive experience with PBL. Most participant indicated a richer understanding of self-directed learning and felt the *Sovereignty* project required they apply the knowledge they gained in class. Students felt more independent and enjoyed the chance to own their learning with the choice available from the learning model. Most students also indicated a greater enjoyment of social studies after the class. One concern revealed from the analysis was the large number of students who identified procrastination as a major weakness after having completed the study. For many participants, the procrastination led to stress, which is another concern.

After the evaluation of data, I collaborated with other teacher-leaders and administration at my school to develop an action plan. Various stakeholders will be involved in the seven areas of focus for our action plan. Next school year, we will implement professional development sessions geared toward student-centered approaches, so our faculty understands the various options available. Professional learning communities will be restructured so they are more purposeful and focus on student learning. Although available technology is not a necessity of student-centered learning, it helps with implementation. Therefore, there is a team at my school concentrating on a project that will allow all students to access technology daily. Social studies administrators and I will focus on the implementation of PBL across our department, because we believe it is the best student-centered method for our subject. A team at school, including guidance counselors, will focus on lessons of time and stress management for our students. With student-centered approaches becoming more

common, the task force for social justice will determine if the present study can help with increasing the number of traditionally marginalized students in upper level classes across middle and high school. Finally, our school wants to open more opportunities for the community to come see what student-centered learning means and how it is being implemented at our school.

Students in the 21st century need skills the traditional classroom does not provide. Student-centered models, such as PBL, allow students to become self-directed problem solvers who can think on their own and cultivates creativity in our contemporary world. When students show ownership of their own learning, they understand the importance of time management and efficiency. Gone are the days when students can sit back and listen to a teacher lecture for an entire class period. We need active learners who will be the at the forefront of our ever-changing, diverse world.

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APPENDIX A

AP HUMAN GEOGRAPHY DESCRIPTION

AP Human Geography is a social studies course that seeks to explain the why of where in human settlement. The course has seven units, all focused around different themes that have diffused all over the world in most part due to globalization. The units of study throughout the year that build upon each other, and full understanding of each unit is necessary to be a successful AP Human Geography student. The seven units are as follows:

I. Geography: Its Nature and Perspectives

II. Population and Migration

III. Cultural Patterns and Processes

IV. Political Organization of Space

V. Agriculture, Food Production, and Rural Land Use

VI. Industrialization and Economic Development

VII. Cities and Urban Land Use

Course Goals

The goals of the AP Human Geography course and exam are for students to be able to:

- Use and think about maps and spatial data
- Understand and interpret the implications of associations among phenomena in place
- Recognize and interpret at different scales the relationships among patterns and processes
- Define regions and evaluate the regionalization process
- Characterize and analyze the changing interconnections among places

APPENDIX B

QUALITATIVE INSTRUMENTATION TOOLS

FIELD NOTES AND OBSERVATIONS LOG

Date and Time	Observation	Notes

GROUP AND INDIVIDUAL INTERVIEW QUESITONS

1. Do you feel you have become a more self-directed learner after being in this class? Why?
2. As a student, what are your strengths after taking this class?
3. As a student, what weaknesses do you still have after taking this class?
4. What was your favorite part of the project-based learning unit?
5. What was your least favorite part of the project-based learning unit?
6. In your opinion, what was the overall purpose of *Sovereignty?*
7. Do you feel *Sovereignty* allowed you to take more ownership of your learning? Why?
8. Did you find the daily activity log useful? Why?
9. Looking back on *Sovereignty* this class, what strategies have you learned that you will use in the future?

APPENDIX C

QUANTIATIVE INSTRUMENTATION TOOLS

STUDENT SURVEY QUESTIONS

1. Before this class, I was in social studies classes that required more than simple memorization to be successful.

1: Strongly Disagree | 2: Disagree | 3: Neutral | 4: Agree | 5: Strongly Agree

2. Before this class, I truly enjoyed social studies.

1: Strongly Disagree | 2: Disagree | 3: Neutral | 4: Agree | 5: Strongly Agree

3. After this class, I truly enjoy social studies.

1: Strongly Disagree | 2: Disagree | 3: Neutral | 4: Agree | 5: Strongly Agree

4. Before this class, I understood how to be a self-directed learner.

1: Strongly Disagree | 2: Disagree | 3: Neutral | 4: Agree | 5: Strongly Agree

5. After this class, I understand how to be a self-directed learner.

1: Strongly Disagree | 2: Disagree | 3: Neutral | 4: Agree | 5: Strongly Agree

STUDENT ACTIVITY LOG

Date	Today I worked on:	The most important concept I learned/concentrated on today was:	Work Ethic 3: Excellent 2: Ok 1: Poor	Growth 3: Excellent 2: Ok 1: Poor	Use of Time 3: Excellent 2: Ok 1: Poor	Tomorrow I need to:

APPENDIX D

CLASS FINAL EXAM SCORE CALCULATION SHEET

AP Human Geography Final Exam Scoring Worksheet

Section I: Multiple Choice: 60 possible points

_____ x .80 = _____
Number Correct (out of 75) — Weighted Section I Score (Do not round)

Section II: Free Response: 60 possible points

Question 1 _____ (out of 9) X 2.2222 = ____
(Do not round)

Question 2 _____(out of 8) X 2.5000 = ____
(Do not round)

Question 3 _____(out of 7) X 2.8571 = _____
(Do not round)

AP Score Conversion Chart Human Geography	
Composite Score Range	AP Score
74-120	5
59-73	4
45-58	3
35-44	2
0-34	1

Sum = _____
Weighted Section II Score (Do not round)

Composite Score _____ + _____ = _____
Weighted Section I Score — Weighted Section II Score — Composite Score (Round)

APPENDIX E

AP HUMAN GEOGRAPHY SAMPLE CURRICULUM ARTICULATION

II. Population and Migration

Enduring Understandings (Students will understand that ...)	Learning Objectives (Students are able to ...)	Essential Knowledge (Students will know that ...)	Examples or Resources
A. Knowledge of the geographic patterns and characteristics of human populations facilitates understanding of cultural, political, economic, and urban systems.	Analyze the distribution of human populations at different scales.	Factors that explain patterns of population distribution vary according to the scale of analysis (i.e., local to global).	2006 MC #9 PRB
		Physical factors (e.g., climate, land forms, water bodies) and human factors (e.g., cultural, economic, historical, political) influence the distribution of population.	2006 MC #18, #28
	Use population density to explain the relationship between people and the environment.	The three methods for calculating population density are arithmetic, physiological, and agricultural.	PE MC #37
	Explain the implications of population distributions and densities.	Population distribution and density influence political, economic, and social processes (e.g., redistricting, provision of services such as medical care).	
		Population distribution and density impact the environment and natural resources (e.g., carrying capacity).	2006 MC #44, #74
		Population distribution and density affect the need for infrastructure (e.g., housing) and urban services (e.g., sanitation).	
	Analyze population composition.	Age, sex, and ethnicity are elements of population composition that may be mapped and graphed at various scales.	PE MC #7 PRB
		Population pyramids are used to project population growth and decline and to predict markets for goods and services.	2003 FRQ #3 2004 FRQ #3 2006 MC #17, #32 2010 FRQ #3 PE MC #8

APPENDIX F

SOVEREIGNTY PROJECT

Sovereignty

AP Human Geography

Sovereignty will serve as a review for the entire year in preparation for both final exams in APHG. Students will complete component(s) that include(s) main ideas from each unit we have learned this year.

Driving Question: What are your country's biggest advantages and disadvantages in relation to key AP Human Geography ideas and concepts?

Assignment

- Using the biggest city in your Sovereignty country, develop and explain **two** main ideas from each of the seven units we have completed this year.
  - I. Geography: Its Nature and Perspectives
  - II. Population and Migration
  - III. Cultural Patterns and Processes
  - IV. Political Organization of Space
  - V. Agriculture, Food Production, and Rural Land Use
  - VI. Industrialization and Economic Development
  - VII. Cities and Urban Land Use

Critical thinking is a must in our classes, so products must demonstrate deep understanding and thoughtful analysis of key concepts and ideas from each unit.

Possible Ideas for Project Completion: you can use one or more of the following choices.

- Create at least two detailed maps/layouts of the most populous city in your country. Label the top of your map/layout with the name and population of your city.
  - The maps can be displayed on a poster board
  - A good idea for this would be using a map of your city with the urban models from Unit VII and explaining your unit connections
  - Provide a typed explanation of your concepts in 3-4 sentences each.

- Create a diorama or 3D model of your capital city showing ideas from each unit. Provide a typed explanation of your concepts in 3-4 sentences each.
- Electronic maps. Be creative here!
- Create an ultimate study guide or lesson that would teach everyone about the major ideas you have chosen. You will need to provide a lesson plan and all materials for the lesson. Materials for the lesson would include a way for students to critically think and apply what they have learned. Think about how Sovereignty makes you apply your learning and create a way for your peers to do that. An outline, PowerPoint/Slide presentation, Quizlet, flashcards, or a list of terms/definitions are not sufficient for this. Students will need to provide a lesson plan in template form. If you would like a template, we can provide one!
- Create a final exam consisting of multiple types of questions and an answer key. The answer key must have an explanation for why the answer is correct. The exam should be a minimum of **35-60 questions** (minimum 3 types of questions, i.e. multiple choice, true/false, matching), **1 FRQ**, and try to concentrate on higher level questions. For example, do not write questions that are simply recall. Here are two examples:
    - Recall Question: Diffusion is

a. Spreading
b. Science
c. Where something originated
d. None of the above

    - Higher-level question: Which of the following is NOT an example of diffusion

. A newspaper expands from distributing in one city to two
a. A sports franchise advertises season tickets in a new area
b. Chick-fil-A opens a new location on Long Point Road
c. The arithmetic density of Charleston grew by 18 people

- Any other teacher-approved idea. A single PPT/Slide presentation, Prezi, children's book, scrapbook, or social media presentation will not be approved.

Sources

- Typed, MLA Bibliography with a minimum of **SIX** reliable sources

Checkpoint: April 20
Final Due Date: May 7

APPENDIX G

SCHOOL DISTRICT APPROVAL LETTER AND CONSENT FORM

Requirements for the Parent Consent Form

1. The project's purpose
2. How the student was selected
3. The procedure to be followed, including an easily understood, precise description of the child's involvement
4. Anticipated benefits for general knowledge, the student, and the District
5. Possible physical, psychological, legal or other risks
6. Whether students will be personally identifiable and to whom
7. To whom results will be available and for what purpose
8. Participants' or parents' right to inspect materials before consenting and to withdraw consent at any time
9. The person to whom inquiries should be addressed before, during, and after the project
10. That the school is neither conducting nor sponsoring the project, if that is the case
11. The lack of adverse consequences for failure to participate

Charleston Excellence is our standard

County SCHOOL DISTRICT

Please adhere to the following guidelines:.

This is to inform you that your request for your research "The Impact of Project-Based Learning on Student Achievement in a Social Studies Classroom" has

been reviewed and approved.
Please note that this district-level approval obligates no school or employee to

participate. Final approval, consent to participate, and cooperation must come from the school principal or administrator of the unit involved. Please show this letter to the school principal or administrator.

- Except in the case of emancipated minors, researchers must obtain signatures of parents or legally authorized representatives on a consent form prior to a student's participation in the research study. All consent forms must contain the following sentences:
  - "I do not wish (my child) to participate." (This must be an option on the form.) o The school district is neither sponsoring nor conducting this research. o There is no penalty for not participating.
  - Participants may withdraw from the study at any time without penalty.
- Assent of children who are of sufficient age and maturity should be obtained prior to their participation in research. In all cases, students should be told that they have the right to decline participation.
- Parents or guardians of students participating in your research must be notified of their right to inspect all instructional materials, surveys, and non-secured assessment tools used in conjunction with your research. This notification should include details of how parents can access these materials.
- Student social security numbers should never be used.
- Data directly identifying participants (students, teachers, administrators), such as name, address, telephone number, etc., may not be distributed in any form to outside persons or agencies.
- All personally identifiable information, such as name, social security number, student ID number, address, telephone number, email address must be suppressed in surveys and reports. Reports and publications intended for audiences outside of the district should not identify names of individual schools or the district.
- Any further analyses and use ofthe collected data beyond the scope of the approved research project, and any extensions and variations ofthe research project, must be requested through CCSD's Office ofAssessment and Evaluation.
- Researchers should forward a copy ofthe results of the research to CCSIYs Office of Assessment and Evaluation.

Please note that this district-level approval obligates no school or employee to participate. Final approval, consent to participate, and cooperation must come from the school principal or administrator of the involved. Please show this letter to the school principal or administrator.

Respectfully,

Research Associate

PARENTAL CONSENT FORM

Dear Students, Parents, and Guardians,

My name is Jason Brisini and I am your child's AP Human Geography teacher for the 2017-2018 school year. I am enrolled in the Doctor of Education (Ed.D.) in Curriculum and Instruction program at the University of South Carolina and am currently completing my dissertation research for the program.

The University of South Carolina utilizes an action research model for their Ed.D. program, which means that I choose an educational approach that would help student achievement and perform a research study on that topic. My topic is Project-Based Learning in a Social Studies Classroom. This year, your child will participate in traditional assessments, but also have a focus on a year-long project that will help their critical thinking and application of learning. In addition, participation in this research will better prepare your child for the class final exam and AP Human Geography Exam in May.

You were selected to participate in this study because you are in my AP Human Geography class for the 2017-2018 school year. There is no penalty for not participating, and you may withdraw from the study at any time without penalty. Charleston County School District and Wando High School are neither sponsoring nor conducting this research. Any physical, psychological, legal, or other risks are small; this will be my fourth year using Project-Based Learning in AP Human Geography, so I understand how to positively implement the strategies. The only person with access to personally identifiable data will be me, and information related to student scores and/or grades will be presented so that no one can identify students. If a student is mentioned, I will use a pseudonym so that the student(s) cannot be identified. The results of this study will be published in my dissertation, which will be available on the internet. If any parent/guardian wishes to see materials before providing their consent, I would be happy to meet, discuss the study, and provide the materials.

Quantitative Data collection for this study is the following:

- Student grades and/or test scores from prior Social Studies and English courses
- Student scores on research-validated instruments on geography
- Student scores from the 2018 AP Human Geography class and class final exam

This information will be analyzed for basic statistical information and to determine the effect of Project-Based Learning on student achievement.

For qualitative data collection, students will complete surveys four times a year to measure their understanding and overall attitude toward Project-Based Learning.

Students would benefit from this research by having a better understanding of the information in AP Human Geography and be better prepared to pass the exams administered at the end of class.

If there are any questions, comments, or concerns about this study, please contact me at jason_brisini@charleston.k12.sc.us.

Sincerely,

Jason Brisini
Social Studies Department Chair
AP Human Geography

Student: I, _____, agree to participate in this study on Project-Based Learning in AP Human Geography. There is no penalty for not participating and I understand that I may opt out of the study at any time without penalty. The school district is neither sponsoring nor conducting this research.

Signature: _____ Date: _____

Parent/Guardian: The student named above has my permission to participate in this test of a study and learning method.

Signature: _____ Date: _____

Parent/Guardian: I do NOT wish for my student to participate.

Signature: _____ Date: _____